



Survey of Physical Fitness Level of Class XI Mia Students at SMA Negeri 21 Surabaya

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Abstract

This research is based on student activities both in the school environment and activities outside of school which are felt to have an influence on the level of physical fitness, then the aim of carrying out this research is to find out the description of the physical fitness level of class XI MIA students at SMA Negeri 21 Surabaya. This research is included in non-experimental research, namely in this research the results of external validity are more emphasized with the aim of providing real data results without any manipulation or intervention from various parties to the samples studied. This research uses a quantitative descriptive approach with a survey method for collecting data in research. The instrument used in this research was the MFT test or Multistage Fitness Test. The data analysis technique used is a descriptive test which includes mean, standard deviation and percentage. After carrying out research on class XI MIA students at SMA Negeri 21 Surabaya, the results showed that the physical fitness level of class The average MFT results show a low value, with the highest average in class XI MIA 4 at 29.81 and the lowest average in class XI MIA 3 at 22.54. The percentage of students in the very poor category with class XI MIA 1 reaching 100% at the very low level, class XI MIA 3 reaching 88.23%, class . Meanwhile, the sufficient category was only found in a few students in class XI MIA 3.

Keywords: *MFT, Physical Fitness, Survey*

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INTRODUCTION

Physical education is an integral part of education that cannot be separated as it serves as a means to achieve educational objectives through a process that involves adapting physical activities. Furthermore, physical education is a process of engagement and interaction among students in shaping a holistic individual by systematically managing physical activities to achieve optimal performance. Physical education (PE) can also serve as a foundation for progress, playing a crucial role in realizing various potentials and contributing to students' growth and development in a systematic and comprehensive manner. As stated in the research (Febriyanti, 2024), physical education plays an essential role in the learning process, focusing on supporting physical growth, mental development, and building habits for a healthy and fit

lifestyle. It is widely agreed that physical education holds values aimed at providing movement experiences that develop students' physical dimensions. Additionally, key aspects in the concept of physical education include physical fitness in Physical Education, Sports, and Health lessons at schools. Quoting from (Zaky Ismail et al., 2024), it is discussed that through physical education in schools, there are opportunities to improve motor skills through sports activities. They explain that "Physical education is part of general education that prioritizes sports and active living to achieve physical, mental, social, and emotional growth that is harmonious, parallel, and proportionate."

Physical education plays a crucial role in shaping students as part of the broader educational process, contributing to their personal development and preparing them for life. Students gain valuable learning experiences through physical activities, games, and exercise, which are conducted systematically, with careful planning and clear objectives. These experiences aim to cultivate and instill a lifelong commitment to a healthy and active lifestyle. In physical education, educators are tasked with fostering high levels of learning motivation among students. This process extends beyond the classroom, incorporating outdoor learning that engages students emotionally, physically, mentally, socially, and intellectually (Mochamad Afif Baihaqi et al., 2023). Physical fitness is the body's ability to adapt using physical activities without significant fatigue, and one noticeable aspect of a person in prime condition is their physical appearance. Therefore, mandatory training programs like physical fitness training should be systematically planned. The basis of this goal is to improve physical conditions. Physical fitness has several elements, including strength, speed, muscle strength, and agility (Adikara & Wisnu, 2024).

In the context of physical education learning, sports serve as the primary tool to enrich educational experiences, including character education and moral values. This research highlights that teachers play a significant role in instilling and shaping good character in students. However, there is still a lack of in-depth studies on the specific roles teachers should emphasize further. Meanwhile, PE learning plays a vital role in enhancing physical fitness levels and promoting physical activities and healthy lifestyles among students (Damayanti et al., 2022). The primary goal of PE learning is to improve students' physical fitness, as mandated by educational standards (Taufiqurrohman, 2016). Furthermore, PE teachers are highly expected to guide students in engaging in effective and efficient physical activities so that learning can be well-executed and yield optimal results (Hartanto et al., 2020). Physical fitness can be defined as the body's ability to carry out daily activities while still being capable of performing other tasks to the maximum without experiencing fatigue (Ofori et al., 2020). It can

also be described as a benchmark of the body's capacity to perform activities at its maximum limit without significant physical exhaustion. Physical fitness is a condition where the body adapts to physical loads without causing notable fatigue, enabling individuals to carry out activities and tasks effectively and efficiently (Hartanto et al., 2020). Physical fitness is influenced by internal factors such as age, genetics, and gender, as well as external factors, including physical activity, body condition, and overall health levels.

Physical fitness among school students is crucial as a support for academic achievement and provides benefits for endurance during learning activities (Mashud, 2019). SMA Negeri 21 Surabaya is one of the most favored schools in Surabaya, known not only for its academic achievements but also for non-academic potentials, such as extracurricular activities in futsal, volleyball, basketball, and other sports. Consequently, students are required to have adequate levels of physical fitness. PE teachers play a significant role in designing engaging lessons that enhance students' interest in PE learning, enabling them to enjoy and experience physical movement, which indirectly embodies the values of PE learning while instilling moral values such as sportsmanship to improve both academic and non-academic achievements (Ady , T Suryana; Dolores, 2016). As a result, the physical fitness levels of XI MIA students influence the learning process. As a school categorized as a favorite in Surabaya, the competitive nature among students is high, leading to numerous extracurricular activities outside school, such as additional lessons and courses in both academic and non-academic fields. Students' schedules are quite packed, with school hours from 6:20 AM to 3:00 PM, while PE lessons are limited to two sessions (90 minutes) per week. From the observations conducted using a Google Form questionnaire distributed to all XI MIA students, responses from 149 participants were analyzed in percentage terms. For instance, 55% of students live more than 3 km away from school, 85.9% use motorcycles for transportation, only 4% walk, and a mere 0.7% cycle. Extracurricular activities dominate with 43.6%, followed by tutoring sessions at 33.6%, and sports club participation at 9.4%, with durations ranging from 2 hours to over 2 hours. These factors affect students' physical fitness levels. The sports development index ensures that individuals from all social strata can recognize and exercise their fundamental right to engage in sports as part of their legal entitlements (Tarigan et al., 2022).

Therefore, this study was conducted on XI MIA students based on the consideration that X and XII classes participate more in school-provided programs, while XI MIA classes have a sufficient population for research purposes. The study will focus on "A Survey of Physical Fitness Levels of XI MIA Students at SMA Negeri 21 Surabaya."

METHOD

Non-experimental research is a type of study that emphasizes external validity, focusing on results that accurately reflect real conditions in the field without any manipulation or intervention from any party on the sample being studied (Maksum, 2018). Based on these characteristics, this study is classified as non-experimental research using a quantitative descriptive approach, aiming to present data that genuinely represents the existing conditions. In this study, the researcher conducted research on physical fitness levels on Friday, June 16, 2023, at 8:00 AM WIB. The study was carried out at the sports field of SMA Negeri 21 Surabaya, located at Jl. Argopuro No. 11-15, Sawahan, Surabaya, East Java, 60251. Considering the conditions and activities at the school, the research was conducted on XI MIA students of SMA Negeri 21 Surabaya.

According to Hardani (2020), the population in research is a crucial aspect, defined as the entirety of individuals or research objects that possess specific characteristics relevant to the study. The purpose of determining the population is to ensure the selection of sample members that align with the subject being studied. Furthermore, a sample is a subset drawn from the population that shares the characteristics and traits of the population, making it a suitable representation for research purposes (Maksum, 2018). The sampling process in this study utilized the purposive sampling method, where the characteristics and traits of the sample were identified beforehand (Arfatin, 2021). Consequently, this research focused on four classes XI MIA 1, 3, 4, and 5 with a total of 144 students from SMA Negeri 21 Surabaya. The data analysis technique used in this study is quantitative descriptive analysis (mean, standard deviation).

In this study, the researcher utilized the Multistage Fitness Test (MFT) as an instrument. This test is designed to assess and measure the maximum capacity of the heart and lungs, as well as the predicted VO2Max value, which can serve as an indicator of an individual's physical fitness level. The one-minute interval indicates the cassette's good condition and the suitability of the 20-meter track. A single audible signal is heard at regular intervals, followed by a brief explanation and a five-second countdown before the test starts. Participants must run to one end of the track before the signal, turn, and run back. Each signal marks the expected position on the track. After one minute, level one is announced, consisting of seven shuttles. The interval between signals shortens progressively, requiring participants to increase speed. At each 20-meter mark, one foot must cross the boundary before turning and waiting for the next signal to continue. Participants should maintain the designated speed.

RESULTS AND DISCUSSION

Result

The results of the MFT data collection for each class have been obtained. Below are the results and categories based on the scores achieved by students at SMA Negeri 21 Surabaya.

Tabel 1. MFT Result MIA 1 – 3

MIA 1		MIA 3	
Man	Woman	Man	Woman
32.9	26.4	23.2	28
33.2	27.2	36.4	20
20.8	24.8	32.9	20
32.6	24.0	18.4	22
29.5	28.0	24	20.8
33.6	25.2	32.9	23.2
29.1	24.0	29.5	22.4
29.8	23.2	32.9	25.2
28.0	21.2	25.2	23.2
31.4	21.6	33.2	18.8
23.2	24.8	40.2	21.6
		19.6	21.6
		26.4	21.6
		26.4	24.4
		26.4	22.4
		24.4	24.8
		36.8	23.2

Tabel 2. MFT Result MIA 4 – 5

MIA 4		MIA 5	
Man	Woman	Man	Woman
29.5	21.6	25.6	23.6
28	24.8	36.8	21.6
23.6	22.4	24.4	30.2
32.4	22.4	38.9	24.4
30.6	22.4	31	21.6
29.8	23.2	30.6	20.8
31.4	21.2	27.2	20.8
33.2	21.2	23.2	21.6
	22		24.8
	20.8		21.6
	19.2		21.6
	23.2		22.4
	22.8		21.6
	21.6		24
	24.8		23.2
	25.2		27.2
	26.4		21.6
	25.2		
	22.8		
	21.6		
	24.4		
	24.4		
	24		

Based on the data analysis using SPSS 26 from the MFT result, male students in the MIA 1 class have a mean score of 29.46, with a minimum of 20.8, a maximum of 33.6, and a standard deviation of 4.1611, while female students have a lower mean of 24.58, with a minimum of 21.2, a maximum of 28.0, and a standard deviation of 2.1269. In the MIA 3 class, male students have a mean score of 28.75, with a minimum of 18.4, a maximum of 40.2, and a standard deviation of 6.2187, whereas female students have a mean score of 22.54, with a minimum of 18.8, a maximum of 28.0, and a standard deviation of 2.2313. For the MIA 4 class, male students achieve a mean score of 29.81, with a minimum of 23.6, a maximum of 33.2, and a standard deviation of 3.0069, while female students record a mean of 22.93, with a minimum of 19.2, a maximum of 26.4, and a standard deviation of 1.7377. In the MIA 5 class, male students have a mean score of 29.71, with a minimum of 23.2, a maximum of 38.9, and a standard deviation of 5.7439, whereas female students achieve a mean of 23.09, with a minimum of 20.8, a maximum of 30.2, and a standard deviation of 2.4961.

Tabel 3. Mean, Standar Deviation, Min and Max.

Class	Gender	Mean	Standar deviation	Min.	Max.
MIA 1	L	29.46	4.1611	20.8	33.6
	P	24.58	2.1269	21.2	28.0
MIA 3	L	28.75	6.2187	18.4	40.2
	P	22.54	2.2313	18.8	28.0
MIA 4	L	29.81	3.0069	23.6	33.2
	P	22.93	1.7377	19.2	26.4
MIA 5	L	29.71	5.7439	23.2	38.9
	P	23.09	2.4961	20.8	30.2

From the results presented, the percentage outcomes have been obtained based on gender, interval categories, and the results for each class. Nearly all students in each class fall into the "very poor" interval category based on the beep test results. Below are the percentage results for each class:

Tabel 4. Percentage result MIA 1

Gender	Category	Frequency	%
Woman	Very Poor	8	72,72%
	Poor	3	27,27%
Man	Very Poor	11	100%

Based on the table results, the distribution of frequency and percentage for the assessment categories by gender is shown. In the female group, 8 individuals (72.72%) fall into the "very poor" category, while 3 individuals (27.27%) are in the "poor" category. On the other hand, all male respondents, totaling 11 individuals (100%), are in the "very poor" category.

Tabel 5. Percentage Result MIA 3

Gender	Category	Frequency	%
Woman	Very Poor	15	88,23%
	Poor	2	11.76%
Man	Very Poor	14	82,35%
	Poor	1	5,88%
	Enough	2	11,76%

Based on the table, the majority of female students in class XI MIA 3 fall into the "very poor" category, reaching 88.23%, while 11.76% are in the "poor" category. Among male students, most are also in the "very poor" category, accounting for 82.35%, with 5.88% in the "poor" category and 11.76% in the "fair" category. The data indicates that the majority of students in class XI MIA 3 are at a low fitness level. The "fair" category is only present among male students, with no female students achieving this level.

Tabel 6. Precentage Result MIA 4

Gender	Category	Frequency	%
Woman	Very Poor	18	78,26%
	Poor	5	21,73%
Man	Very Poor	7	87,5%
	Poor	1	12,5%

Based on the data from the table, the majority of female students in class XI MIA 4 fall into the "very poor" category, with a percentage of 78.26%, while 21.73% are in the "poor" category. Among male students, almost all fall into the "very poor" category, with 7 students (87.5%), and only 1 student (12.5%) is in the "poor" category.

Tabel 7. Percentage Result MIA 5

Gender	Category	Frequency	%
Woman	Very Poor	13	76,47%
	Poor	4	23.52%
Man	Very Poor	6	75%
	Poor	2	25%

Based on the data in the table, female students in class XI MIA 5 are in the "very poor" category with a percentage of 76.47%, while 23.52% are in the "poor" category. Meanwhile, among male students, 75% are in the "very poor" category, and 25% are in the "poor" category. This data indicates that the majority of both male and female students are still at a low fitness level.

Discussion

The results of the descriptive test analysis conducted using SPSS 26 show the average physical fitness scores of students in each class on the MFT. In class XI MIA 1, the average score for male students is 29.46, while female students have an average score of 24.58. In class XI MIA 3, male students have an average score of 28.75, while female students have an average score of 22.54. In class XI MIA 4, the average score for male students is 29.81, while female students have an average of 22.93. In class XI MIA 5, male students have an average score of 29.71, while female students have an average of 23.09. These averages highlight the need for greater attention to students' physical fitness, particularly female students, to help them reach a good fitness standard.

Based on the results of the Multistage Fitness Test (MFT) conducted on students from classes XI MIA 3, XI MIA 4, and XI MIA 5 at SMA Negeri 21 Surabaya, it can be concluded that the students fall into the "very poor" category for physical fitness. In class XI MIA 1, all male students fall into the "very poor" category, with a percentage of 100%, while 72.72% of female students are in the "very poor" category, and 27.27% are in the "poor" category. In class XI MIA 3, 88.23% of female students and 82.35% of male students are in the "very poor" category, with only 11.76% of male students achieving the "fair" category. In class XI MIA 4, 78.26% of female students and 87.5% of male students are in the "very poor" category, while 21.73% of female students and 12.5% of male students fall into the "poor" category. In class XI MIA 5, the results are similar, with 76.47% of female students and 75% of male students in the "very poor" category, while 23.52% of female students and 25% of male students are in the

"poor" category. Out of the total 144 students, 113 students participated in the test, as those who were absent had valid reasons such as illness or family events. The 113 students who completed the MFT represent the minimum required number of survey subjects, ensuring that the research sample is sufficient.

Based on a study conducted by Zenitha (2019), the physical fitness levels of students are very low due to the lack of high and very high physical activity. Physical exercise for students is only carried out during PJOK lessons once a week at school, which impacts their overall physical fitness. Additionally, a relevant study by Dwi Amena Resi (2022) found that the physical fitness of female students is generally poor, as they engage in lower physical activity and struggle to maintain a healthy lifestyle, including regular exercise. Research by Nursena (2019) on the physical fitness of junior high school students showed varied results, with the majority of students falling into the categories of poor and moderately adequate fitness levels. Furthermore, a study by Fakoiria & Andrijanto (2018) on the physical fitness of vocational high school students found that 50% (18 students) were categorized as having moderate fitness, while the other 50% (18 students) had good physical fitness. Physical fitness is significantly influenced by nutritional status, which is determined by body composition. The human body consists of various essential elements, including water, muscles, bones, and fat. Fat plays a vital role in providing energy for low-intensity activities, insulating the body against cold, and protecting vital organs (Surisman et al., 2023). Physical exercise and sports activities are structured and long-term endeavors that are progressively and individually adapted to enhance human physiological and psychological functions. These activities are designed to achieve specific goals. This highlights that attaining high levels of skill and peak performance requires significant time, effort, and perseverance, following the specific guidelines and training standards of the sport in question (Tangkudung et al., 2024).

CONCLUSION

Based on the data collected using the Multistage Fitness Test at SMA Negeri 21 Surabaya, it can be concluded that the majority of students in all classes fall into the very poor category. The number of students with very poor results reaches 81.41%, which is a very high percentage. Meanwhile, only 2 students achieved the adequate category, representing just 1.76%. These results are considered normal, as not all students have well-trained physical fitness. The students who reached the adequate category are likely those who participate in extracurricular activities at school.

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