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ANALYSIS OF PHYSICAL FITNESS IN STUDENTS OF GRADE 10 MAN INSAN CENDEKIA GOWA

Muslim Bin Ilyas [1] *, Sudirman [2]
[1] Universitas Negeri Makassar, Indonesia.
[2] Universitas Negeri Makassar, Indonesia.
* Coressponding Author. E-mail: muslim.bin.ilyas@unm.ac.id

Abstract
Abstract This study aims to analyze the physical fitness levels of Grade 10 students at MAN Insan Cendekia Gowa. The research highlights differences in physical fitness between male and female students based on categorized assessment results. Findings show that 55% of male students fall into the good to very good categories, reflecting a relatively high level of physical fitness, while only 15% are in the poor and very poor categories. In contrast, female students exhibit a more balanced distribution, with 35% in the moderate category and 30% in the good category. However, 25% of female students are categorized as poor to very poor, indicating that physical fitness remains a concern in this group. These results suggest the need for targeted interventions to improve physical fitness, especially among female students.

Keywords: Physical Fitness and Students.

INTRODUCTION

Physical fitness is a key indicator of human quality of life, especially during adolescence—a golden period for character development, physical growth, and the formation of lifelong habits. At this stage, the foundation of long-term health is built, with physical activity acting as one of its core components. However, amidst the rise of digital culture and increasing academic pressure, students often neglect physical activity. They tend to spend more time on digital devices than engaging in physical movement. The sedentary lifestyle phenomenon has become a global concern. According to the World Health Organization (WHO), more than 80% of adolescents worldwide fail to meet the recommended minimum of one hour of daily physical activity. In Indonesia, this trend is particularly alarming. Recent studies show that high school students in urban areas like Makassar have low levels of physical fitness due to prolonged sitting, a lack of motivation, and minimal physical engagement (Andi et al., 2021).

This situation was worsened by the COVID-19 pandemic, which shifted all educational activities online for nearly two years. As a result, physical education (PE) lost its significance in students' daily routines. A study in West Java revealed that during the pandemic, more than 49% of students experienced a sharp decline in physical activity levels, dropping into the “low” category (Tarigan & Hidayat, 2022). This decline affected not only physical health but also mental well-being. Scientific evidence strongly supports the positive correlation between physical activity and reduced levels of stress, anxiety, and depression in adolescents. A global meta-analysis found that better cardiorespiratory fitness in youth significantly lowers the risk of developing mental health issues and supports stronger emotional resilience (Laily et al.,

2023). Thus, physical fitness is not merely about muscles—it's about overall quality of life. Furthermore, adolescent physical fitness plays a critical role in long-term health outcomes. Longitudinal studies have shown that teenagers with low physical fitness are more prone to non-communicable diseases such as hypertension and type 2 diabetes in adulthood (Reddit, 2024). Therefore, investing in youth physical fitness is a strategic move toward a healthier future generation.

Physical fitness, however, is not shaped by biological factors alone—it is also influenced by social, cultural, and institutional environments. In schools, the role of PE teachers, availability of sports facilities, school culture, and parental support are significant in shaping students' physical activity habits. Yet, studies examining physical fitness levels in Islamic boarding schools or faith-based institutions remain scarce.

MAN Insan Cendekia Gowa stands out as one of the leading Islamic senior high schools in South Sulawesi, combining general and religious education. Students here are expected to excel academically and spiritually while upholding high discipline and competitive standards. These characteristics make it a unique setting for exploring how physical fitness develops amid academic pressure and strong religious values. As a highly selective institution, students at MAN Insan Cendekia Gowa are typically intelligent, diligent, and highly structured. However, little research has been conducted to assess their lifestyle patterns, or whether academic demands actually limit their opportunities for regular physical activity. This gap highlights the urgency and originality of this research.

Moreover, this study could serve as an evaluation tool for school policymakers in assessing the effectiveness of PE programs in religious-based schools. Are the current PE activities sufficient to build ideal fitness levels? How do religious routines, academic workloads, and time management affect students' physical activity? By understanding the physical fitness levels of 10th-grade students, the school can develop more balanced learning strategies—ones that not only pursue academic excellence but also prioritize student well-being. In Islam, maintaining a healthy body is a religious duty. The Prophet Muhammad (PBUH) said: "The strong believer is better and more beloved to Allah than the weak believer."

This study could also pave the way for further research on the relationship between physical activity and academic performance in Islamic school settings. Literature shows that physically active students generally have better concentration and academic outcomes than their sedentary peers (Nuraini et al., 2022). Beyond academic value, the findings from this study may encourage students to engage more actively in sports, improve PE curriculum design, and even inspire the creation of school-wide fitness communities. This aligns with the national education agenda that emphasizes character development, health, and 21st-century competencies. This research will apply standardized national physical fitness assessments, such as the Kemenpora fitness test, which includes the 12-minute run, push-ups, sit-ups, and shuttle runs. The data will be analyzed quantitatively and compared based on gender, body mass index (BMI), and students' daily physical activity duration.

Ultimately, this study aims to provide a clear picture of the physical fitness levels of 10th-grade students at MAN Insan Cendekia Gowa and identify the contributing factors. It also serves as a collective reflection that academic achievement cannot thrive without the support of a healthy body and mind. By viewing this phenomenon holistically and through data-driven

insights, this study is not only locally relevant but also contributes significantly to the national discourse on adolescent health and education—especially within elite Islamic schools.

METHODS

This study employed a descriptive quantitative approach aimed at providing an objective overview of the physical fitness levels among 10th-grade students at MAN Insan Cendekia Gowa. This approach was chosen to describe factual conditions without manipulating any variables.

1. Population and Sample

The population of this research consisted of all 10th-grade students at MAN Insan Cendekia Gowa during the 2024/2025 academic year. From this population, a sample of 40 students was selected, consisting of 20 male students and 20 female students. The sampling technique used was purposive sampling, in which participants were selected based on specific criteria, namely: physically healthy, actively participating in Physical Education (PE) classes, and willing to take part in the full series of physical fitness tests.

2. Research Design

The design of this study was cross-sectional, meaning that data collection was conducted once at a specific point in time to capture a snapshot of the students' current physical fitness levels. The data collected was analyzed to determine the average fitness level and to compare the results between male and female students.

3. Instruments and Data Collection Techniques

Data was collected through direct physical assessments using a standardized physical fitness test battery from the Indonesian Ministry of Youth and Sports (Kemenpora RI). The components of the test included:

- 12-minute run: to assess cardiorespiratory endurance,
- Push-ups (within 60 seconds): to measure upper-body muscular strength and endurance,
- Sit-ups (within 60 seconds): to measure abdominal muscle strength,
- Shuttle run (4 × 10 meters): to assess speed and agility,
- Vertical jump: to evaluate lower-body muscle power.

Each participant was required to complete all components of the test under the direct supervision of the researcher and the school's PE teacher. Prior to testing, students were given clear instructions and a demonstration of proper technique. Tests were conducted on the school's athletic field, with the timing and environmental conditions adjusted to ensure safety and consistency.

4. Data Analysis Technique

The results from the physical fitness tests were analyzed using descriptive statistical methods, including mean, standard deviation, and frequency distribution. Scores were categorized according to the national physical fitness assessment standards provided by Kemenpora, ranging from "very good," "good," "average," "poor," to "very poor." The analysis also included a comparative examination between male and female students to determine whether there were notable differences in aspects such as endurance, muscular strength, and speed between genders.

RESULT AND DISCUSSION

Research results can be presented in graphical, tabular, or descriptive form. Analysis and interpretation of these results is required before they are discussed.

Descriptive analysis was conducted to determine the average value (mean), minimum value, maximum value, total (sum), and standard deviation of physical fitness scores obtained by students. Based on the results of data processing from 40 students (20 boys and 20 girls), the following results were obtained:

Tabel 1. Descriptive Statistics (Descriptive Test Results)

Group	N	Mean	Min	Max	Sum	Std. Deviation
Male	20	72.4	60	85	1,448	7.12
Female	20	68.1	55	80	1,362	6.75

From the table above, it is known that male students have an average physical fitness score of 72.4, while female students have an average of 68.1. The maximum score achieved by male students is 85 and the lowest score is 60, while for female students the highest score is 80 and the lowest score is 55. The standard deviation of each group shows a relatively moderate variation in scores, both for male students (7.12) and female students (6.75), which shows a data distribution that is not too extreme.

Percentage Test Results Percentage analysis is used to determine the distribution of students' physical fitness levels based on national standard categories, namely: Very Good, Good, Moderate, Poor, and Very Poor.

Table 2. Percentage of Physical Fitness Level of Male Students

Kategori	Frekuensi	Persentase (%)
Sangat Baik	4	20%
Baik	7	35%
Sedang	6	30%
Kurang	2	10%
Sangat Kurang	1	5%

Total	**20**	**100%**

Table 3. Percentage of Physical Fitness Level of Famele Students

Kategori	**Frekuensi**	**Persentase (%)**
Sangat Baik	2	10%
Baik	6	30%
Sedang	7	35%
Kurang	4	20%
Sangat Kurang	1	5%
Total	**20**	**100%**

1. In male students, 55% were in the good to very good category, indicating a relatively high level of physical fitness. Only 15% were in the poor and very poor categories.
2. While in female students, the distribution of scores was more inclined to the moderate (35%) and good (30%) categories, but there were 25% who were in the poor and very poor categories, indicating that there were still problems in the level of physical fitness in this group.

The findings of this study reveal a significant difference in the physical fitness levels between male and female 10th-grade students at MAN Insan Cendekia Gowa. Based on descriptive statistics, male students achieved a higher mean score (72.4) compared to female students (68.1). This suggests that, on average, the boys demonstrated better physical performance in endurance, strength, and agility tests. The standard deviation values for both groups were relatively similar, indicating that the distribution of scores was fairly consistent within each gender group.

These results align with existing research that consistently shows gender-based physiological differences in adolescents, particularly in muscle strength and cardiovascular endurance. Boys tend to have higher lean muscle mass and aerobic capacity due to hormonal differences, which may explain their superior performance in tests such as the 12-minute run, push-ups, and vertical jump. However, it is important to note that these differences do not imply lower potential among female students, but rather point to the need for tailored training approaches.

In terms of percentage analysis, 55% of male students were categorized as having “Good” to “Very Good” fitness levels, while only 40% of female students reached these levels. Conversely, a higher proportion of female students (25%) fell into the “Poor” and “Very Poor” categories compared to males (15%). This finding raises concerns about the level of physical activity and overall fitness engagement among female students, which may be influenced by cultural expectations, lower participation in sports, or limited opportunities for structured

exercise. The relatively lower performance of female students may also reflect differences in attitude or confidence toward physical activity. Previous studies have found that adolescent girls are more likely to reduce physical activity as they age, often due to body image concerns, social norms, or lack of encouragement. In a boarding school environment like MAN Insan Cendekia Gowa, where academic and religious activities are intensive, physical activity might be deprioritized—especially among female students.

Despite the challenges, it is encouraging that a significant number of students in both groups achieved “Average” to “Good” fitness categories. This suggests that the school’s PE curriculum is having a positive impact, although there remains room for improvement, particularly in increasing engagement and motivation among students with lower fitness scores. Introducing more inclusive and engaging physical activity programs may help address these gaps.

Another important aspect to consider is the role of extracurricular activities and daily routines. Students who regularly engage in sports teams or physical clubs tend to perform better in fitness assessments. Therefore, schools should provide balanced schedules that support both academic achievement and physical development. Gender-sensitive programs that consider the interests and comfort levels of female students may also help improve their participation. In conclusion, the results of this study highlight the importance of evaluating and enhancing physical education practices in secondary schools. While male students generally displayed higher physical fitness levels, the disparities between genders indicate a need for strategic interventions. Schools like MAN Insan Cendekia Gowa must not only uphold academic excellence but also ensure that students maintain healthy and active lifestyles, as physical fitness is closely linked to mental well-being, academic performance, and long-term health.

CONCLUSSION

Based on the results of the study, it can be concluded that the overall physical fitness level of 10th-grade students at MAN Insan Cendekia Gowa falls within the “average to good” category, with male students generally showing higher performance compared to female students. The descriptive statistical analysis revealed that male students had a higher mean score (72.4) than female students (68.1), indicating better endurance, muscular strength, and agility among the boys. Percentage analysis further confirmed that 55% of male students were in the "good" to "very good" category, while female students showed a higher concentration in the "average" and "poor" categories. This gender-based difference may be attributed to physiological factors, activity patterns, or cultural influences on participation in physical activity.

The findings highlight the need for improved strategies to enhance physical fitness among students, especially female students. These strategies may include inclusive sports programs, motivation-based fitness activities, and school-wide efforts to balance academic and physical development. Ensuring equal opportunities and encouragement for both genders in physical education is essential. In conclusion, while the school has shown positive outcomes in promoting student fitness, further interventions are necessary to raise awareness and improve physical fitness levels comprehensively across all student groups. A physically fit student population not only contributes to better academic outcomes but also supports long-term health and well-being.

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