

Physical Fitness Level of Students of State Islamic Junior High School 2, Kediri Regency

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Abstract

Physical fitness is a person's ability to perform daily activities without experiencing excessive fatigue. This study aims to determine the physical fitness levels of students at MTsN 2 Kediri Regency, a religious school with a busy daily schedule that potentially limits exercise time. The study used a quantitative approach with a survey method of 67 eighth-grade students selected using purposive sampling and measured using the Nusantara Student Fitness Test (TKPN). The results of the study showed that the physical fitness level of students was dominated by the sufficient category with 28 students (42%), followed by the good category with 20 students (30%), very good with 12 students (18%), and less than 7 students (10%), while the very poor category was not found (0%). In general, the physical fitness level of students was in the sufficient category, but still needs to be improved so that more students reach the good and very good categories.

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1. INTRODUCTION

Physical fitness is a person's ability to perform daily activities without experiencing excessive fatigue and still have energy reserves. According to Panggraita (2021), physical fitness is defined as an individual's ability to perform daily activities and work without experiencing excessive fatigue. This allows the body to maintain sufficient energy to handle any additional demands placed on it. Meanwhile, according to (Damsir et al., 2021), physical fitness is a person's ability to carry out daily tasks with ease, without feeling excessive fatigue, and still having remaining energy reserves to enjoy leisure time and meet urgent needs.

Another opinion also states that (Andre Sembiring, 2022). Physical fitness is a condition in which the body can carry out various activities well without experiencing significant fatigue. For students, physical fitness plays an important role in supporting health, improving learning concentration, and supporting physical and mental development. The level of physical fitness is influenced by various factors, such as physical activity, diet, rest time, and a healthy lifestyle. MTsN 2 Kediri Regency is a religious-based school with busy academic and religious activities. In addition to participating in teaching and learning activities, students also participate in various other supporting activities so that opportunities for physical activity are more limited. In addition, Physical Education, Sports, and Health (PJOK) learning is only held once a week with an allocation of 2 x 40 minutes (80 minutes). The duration is considered still limited because it must include warm-up, core, and closing activities,

so the time available for physical activity is not optimal. According to Winarno (n.d.), the relationship in the implementation of PJOK learning is that the systematics of learning must be carried out according to procedures, starting with warm-up, which takes 5-10% of the total duration, then core exercises, which take up 80-90%, and ending with closing lessons, which take 5%. Based on the results of initial observations, some students appeared to experience fatigue due to the density of activities carried out every day. Based on these conditions, this study was conducted to determine the level of physical fitness of students at MTsN 2 Kediri Regency using the Nusantara Student Fitness Test (TKPN) instrument. The research results are expected to be used as evaluation material for schools in developing more effective physical fitness development programs so that students' health, fitness, and learning quality can continue to be improved.

Although physical fitness among junior high school students has been examined in several prior studies, most have focused on general public schools with standard academic schedules, such as the study by Dharmajayanti et al. (2023) on the relationship between physical activity, body mass index, and physical fitness among students at SMP Negeri 13 Makassar, and Dewi et al. (2024), who analyzed junior high school students' physical fitness using the TKPN instrument. Comparatively little attention has been given to students in religious-based schools such as madrasah tsanawiyah, where a dense combination of academic and religious activities may further reduce the time available for physical activity beyond the already limited PJOK schedule found in general schools. This study addresses that gap by specifically examining physical fitness among students at MTsN 2 Kediri Regency, a school with a distinctively busy daily schedule that combines general academic subjects with religious activities. In doing so, this research contributes new empirical evidence on physical fitness within the specific context of madrasah-based education, using the most recent nationally standardized TKPN instrument (KEMENPORA, 2022), which has not been widely applied within this type of school setting.

2. METHOD

According to (Syahroni, 2022), quantitative research is a method of collecting, presenting, and interpreting data by utilizing numbers, tables, graphs, diagrams, images, or other forms of display to strengthen the position of the data being analyzed. This study uses a quantitative approach with a descriptive survey method to describe the physical fitness level of MTsN 2 Kediri Regency students based on numerical data. The variable studied is the physical fitness level of grade VIII students as measured using the Nusantara Student Fitness Test (TKPN) from the Ministry of Youth and Sports (KEMENPORA, 2022). Based on the opinion of Suriani et al. 2023), a population is a collection of all objects or subjects in an area that meet certain criteria related to the research problem. The population in this study was all 385 grade VIII students of MTsN 2 Kediri Regency. The research sample was selected using a purposive sampling technique, namely based on certain criteria that have been determined by the researcher. The purposive sampling technique in this study was applied using several criteria, namely: (1) students were officially enrolled as active eighth-grade students at MTsN 2 Kediri Regency; (2) students were physically healthy and had no medical condition or injury that would prevent them from completing all five TKPN test items (BMI measurement, sit and reach, sit up, squat thrust, and the pacer test); (3) students were present on the day of testing and were willing to participate in the entire testing procedure; and (4) students and their parents/guardians provided consent for their data to be used in this study. Of the total population of 385 eighth-grade students, 67 students met all of the criteria above and completed every stage of the TKPN test, and this group was therefore established as the research sample. A sample is defined as a portion of a population whose elements are selected through a specific method to serve as the primary source of information, and the results of this information are then used to generalize the entire population (Arikunto). Therefore, the sample size was 67 eighth-grade students. Data collection was conducted directly through a series of tests, including Body Mass Index (BMI). *V Sit and Reach, Sit Up, Squat Thrust, and Pacer Test*. All

measurement results were recorded and categorized according to age and gender, then analyzed statistically to determine the level of physical fitness of students and to become the basis for evaluation in compiling fitness development programs at schools.

3. RESULTS AND DISCUSSION

A total of 67 seventh-grade students from MTsN 2 Kediri Regency participated in a physical fitness assessment using the Nusantara Student Fitness Test (TKPN) instrument. The assessment was conducted to obtain an overview of the students' physical fitness levels based on predetermined categories: excellent, good, sufficient, poor, and very poor. The following results were obtained:

- a. The results of the research and discussion of the overall TKPN of MTsN 2 Kediri Regency students

Category	Son	Daughter	Frequency	Percentage
Very well	9	3	12	18%
Good	13	7	20	30%
Enough	7	21	28	42%
Not enough	1	6	7	10%
Very little	0	0	0	0%
Total	30	37	67	100%

Table 3.1. Overall Results of TKPN for MTsN 2 Kediri Regency Students

Based on the results of the Nusantara Student Fitness Test (TKPN) for 67 seventh-grade students of MTsN 2 Kediri Regency, the majority of students were in the sufficient category (28 students (42%)), followed by the good category (20 students (30%)), very good (12 students (18%)), and less than 7 students (10%). There were no students in the very poor category (0%). These results indicate that the students' physical fitness level is generally in the sufficient category. If displayed in a bar chart, it would look like this:

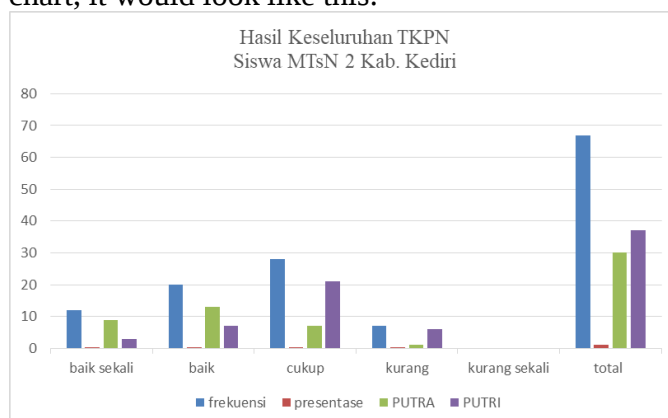


Figure 3.1 Overall Results of TKPN Students of MTsN 2 Kediri Regency

The results of this study indicate that more than half of the students (82%) are in the range of sufficient to very good, while the rest still need more attention to improve their physical condition. The dominance of the sufficient category (42%) indicates that the physical abilities of many students are still at an acceptable basic level, but do not yet reflect the ideal physical condition. Several factors causing the low physical fitness of students start from the lack of movement directly impacting the functional abilities of the body, then the second habit is sitting too long along with the widespread use of mobile phones that often occurs among teenagers, according to (Rokhim and Suyoko 2024, n.d.) teenagers who have sedentary habits tend to have low physical fitness compared to teenagers who are active in physical activities. Habits such as

sitting for long periods of time, excessive use of gadgets, and lack of movement can reduce cardiorespiratory capacity and muscle strength. Then the third is the quality and limited hours of PJOK lessons at school. The results of the study (Ansari et al., 2025) explain that the effectiveness of learning is influenced by several factors such as learning methods, time management, and environmental conditions that interfere with reducing students' comfort and concentration during physical activities.

b. Research results and discussion per test item

1) Body Mass Index (BMI) Results

Nutritional Status Category Index	Threshold (Z-Score)	Frequency	Presentasi	Son	Daughter
Malnutrition	-3 SD s.d. < -2 SD	2	3%	1	1
Good nutrition	-2 SD s.d. +1 SD	50	75%	19	31
More nutrition	> +1 SD s.d. +2 SD	13	19%	8	5
Obesity	> +2 SD	2	3%	2	0
Total		67	100%	30	37

Table 3.2 Body Mass Index (BMI) Results)

Based on Table 3.2, the Body Mass Index above shows the frequency and percentage of physical fitness levels of 67 seventh-grade students who were the subjects of the study. The results showed that the frequency of malnutrition status was 2 students (3%). 50 students (75%) were well-nourished. 13 students (19%) were over-nourished. Then, the obesity nutritional status was 2 students (3%). When displayed in a bar chart, it would look like this:

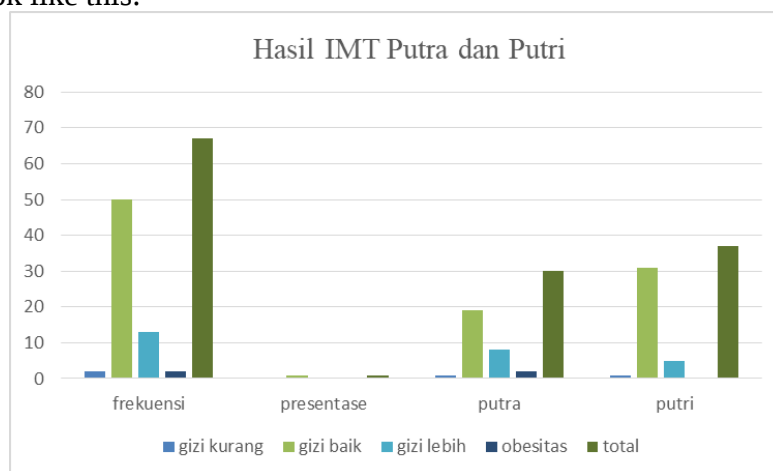


Figure 3.2 BMI results for male and female students

According to Basic Health Research (Riskesdas) data, the obesity rate in Indonesia is still relatively high, especially among adolescents aged 13-15 years, which reached 16%, consisting of 11.2% who are overweight and 4.8% who are very obese (obese). The impact of excess weight causes a decrease in lung and heart capacity and weak muscle endurance. (Dharmajayanti et al., n.d.) states that excess weight is associated with decreased performance in various components of physical fitness, especially speed, endurance, and agility. As a result, students who are overweight or obese often show low results on tests that involve rapid body movement. Students who have weight problems, such as being overweight and obese, need systematic nutritional support, including

learning about good eating patterns, consultation with health workers, and increasing the frequency of physical activity appropriate to their condition. Physical Education teachers have a very important role here, not only as physical activity instructors, but also as advocates for healthy lifestyle behaviors at school and at home.

2) Results *V Sit and Reach*

Category	Son	Daughter	Frequency	Presentation
Very well	7	2	9	13%
Good	8	0	8	12%
Enough	7	2	9	13%
Low	7	17	24	36%
Very low	1	16	17	25%
Total	30	37	67	100%

Table 3.3 Results *sit and reach*

Based on the data above, it shows that the very good category has 9 (13%) students consisting of 7 male students and 2 female students. The good category has 8 (12%) students, consisting of only 8 male students. Then the sufficient category has 9 students (13%), consisting of 7 male students and 2 female students. And the low category has a frequency of 24 students (36%), consisting of 7 male students and 17 female students. The very low category has 17 (25%) students, with 1 male student and 16 female students. When displayed in a bar chart, it will look like this:

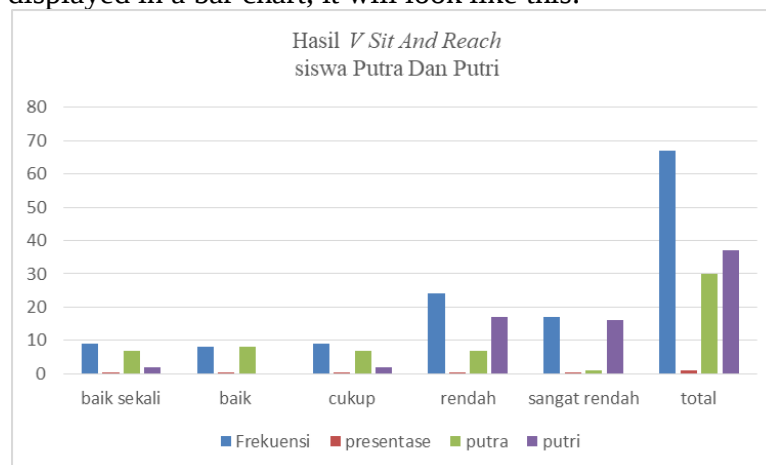


Figure 3.3 Results of V Sit And Reach

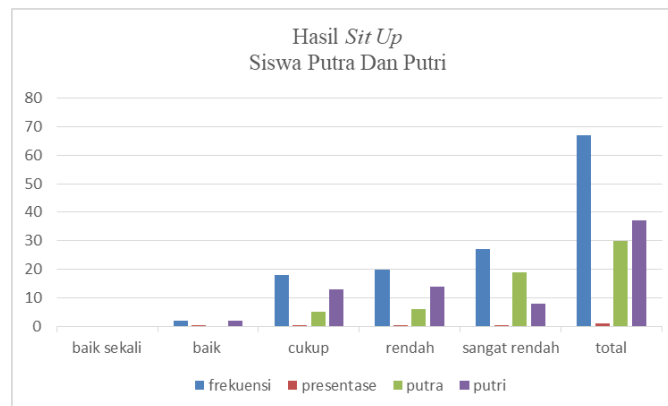
V sit and reach is one of the components that measures body flexibility. Then, according to (Ashwini, 2021), it states that the behavior of *sedentary* is one of the factors that influences the decline in physical fitness, which has an impact on flexibility. *sedentary* In students, prolonged sitting and lying down can lead to decreased muscle strength and body flexibility due to infrequent body movement and inadequate joint movement. This indicates that body flexibility is one of the weakest fitness components among all measured components. This finding requires the attention of physical education teachers to provide more time for flexibility training in learning programs.

3) Results *Sit-up*

Category	Son	Daughter	Frequency	Presentation
Very well	0	0	0	0%
Good	0	2	2	3%
Enough	5	13	18	27%
Low	6	14	20	30%
Very low	19	8	27	40%
Total	30	37	67	100%

Table 3.4 Results *Sit Up*

Based on the data above, the frequency and percentage of physical fitness levels of 67 eighth-grade students show that the majority of students are in the very low category, amounting to 27 students (40%), consisting of 19 male students and 8 female students. The low category is in second place with a total of 20 students (30%), consisting of 6 male students and 14 female students. The sufficient category is 18 students (27%), consisting of 5 male students and 13 female students. The good category is 2 students (3%), consisting of only 2 female students. And there are no students who are in the very good category 0 (0%). If seen in the bar chart, it will look like this:

Figure 3.4 Results *Sit Up*

This component is the fitness element that requires the most improvement. To increase the amount and load of exercise, routine and targeted training is required, tailored to the student's abilities. This will maximize the response of the abdominal muscles. According to (Janna et al., 2026), regularly performing sit-ups with gradually increasing load is effective in increasing abdominal muscle strength and endurance of the *rectus abdominis*.

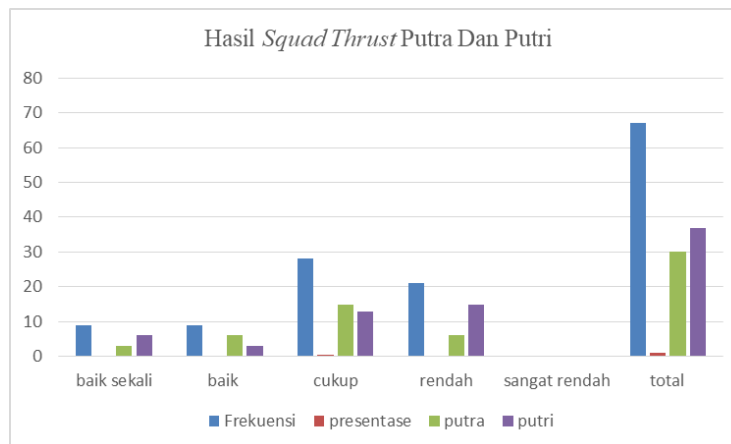
4) Results *Squad Thrust*

Category	Son	Daughter	Frequency	Presentation
Very well	3	6	9	13%
Good	6	3	9	13%
Enough	15	13	28	42%
Low	6	15	21	31%
Very low	0	0	0	0%
Total	30	37	67	100%

Table 3.5 Squad Thrust Results

Based on Table 4.5 *Squad Thrust*, the data above shows the frequency and percentage of the physical fitness levels of 67 eighth-grade students who were the subjects

of the study. The data above shows that the majority of them showed the sufficient category with a frequency of 28 students (42%). The second position was in the low category with a frequency of 21 students (31%). The good and excellent categories had the same frequency, namely 9 students (13%). None of the students entered the very low category (0%). If depicted in the form of a bar chart, it would look like the following image:

Figure 3.5 results *Squad Thrust*

The dominance of the sufficient category (42%) in this component indicates that the muscular endurance capacity that supports the execution of the squad thrust movement still needs to be improved. According to Abdul Mufti and Irwan Hermawan (2021), *squad thrust* provides a positive influence on increasing the strength of leg and arm muscles.

5) Results *Pacer Test*

Category	Son	Daughter	Frequency	Presentation
Very well	0	0	0	0%
Good	0	0	0	0%
Enough	0	0	0	0%
Low	1	1	2	3%
Very low	29	36	65	97%
Total	30	37	67	100%

Table 3.6 Pacer Results Test

Based on table 4.6 *Pacer Test*, the data above shows the frequency and percentage of the physical fitness levels of 67 eighth-grade students who were the subjects of the study. The data above shows that the majority of them showed a very low category, with a frequency of 65 students (97%). Then the low category with a frequency of 2 students (3%). And none of the students entered the sufficient, good, or very good category (0%). If depicted in the form of a bar chart, it would look like the following image:

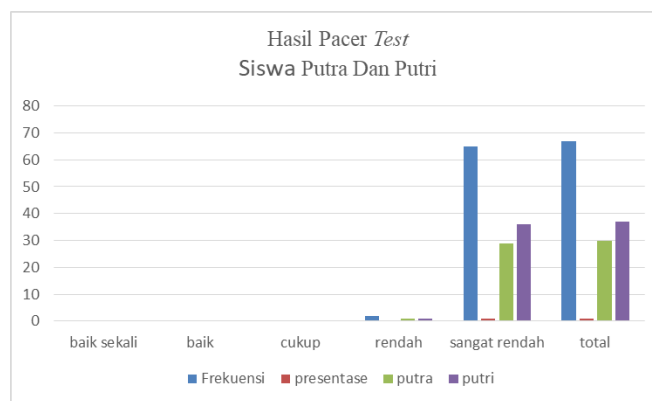


Figure 3.6 Pacer Results Test

This condition reflects a lack of lung and heart capacity. The results, which are almost entirely in the lowest category for this component, require further evaluation. These results also align with research (Dewi et al., 2024), which still predominantly falls in the low category. This condition indicates that students' aerobic capacity is not yet optimal, necessitating increased physical activity and programmed aerobic training. Furthermore, findings (Xu et al., 2022) suggest that the factors contributing to this low-test score could be due to students' low involvement in physical activities inside and outside of school, which impacts physical fitness levels, particularly aerobic capacity.

c. Research results and discussion per gender

1) TKPN results for male students

Category	Frequency	Presentation
Very well	9	30%
Good	13	43%
Enough	7	23%
Not enough	1	3%
Very little	0	0%
Total	30	100%

Table 3.7 Results of the TKPN for Male Students

The table shows that the majority of male students fall into the good category with a frequency of 13 students (43%). The very good category falls into the frequency of 9 students (30%). The sufficient category falls into the frequency of 7 students (23%). The very poor category falls into the frequency of 1 student (3%). And there are no students who fall into the very poor category (0 students). When viewed from the bar chart, it will look like the image below:

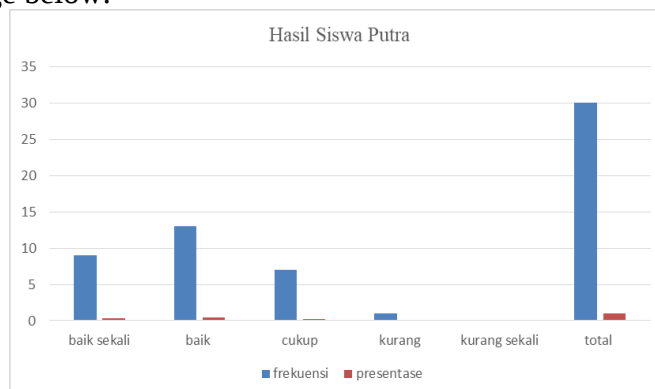


Figure 3.7 Results of TKPN for Male Students

These results indicate that 73% of male students were in the good to excellent category, which represents a fairly good physical fitness profile and is significantly better than the overall sample. These results align with research by Kretschmer et al. (2023), which found that male students had higher levels of physical activity than female students. Furthermore, the variation in physical activity among male students was also greater, resulting in greater disparities in activity between individuals compared to female students. Although the physical fitness of male students was considered good, the presence of 23% in the adequate category and 3% in the poor category suggests that fitness improvement programs should not be neglected, even for groups showing better results.

2) Results of the TKPN for female students

Category	Frequency	Presentation
Very well	3	8%
Good	7	19%
Enough	21	57%
Not enough	6	16%
Very little	0	0%
Total	37	100%

Table 3.8 Results of Female Student TKPN

The results of the TKPN measurements on 37 female students showed a strikingly different fitness profile compared to male students. Twenty-one students (57%) were in the adequate category, seven (19%) in the good category, six (16%) in the poor category, and three (8%) in the excellent category. No students were in the very poor category (0%).



Figure 3.8 Results of the Female Student TKPN

The dominance of the sufficient category (57%) and the presence of 16% of female students in the insufficient category suggest that girls require significantly greater attention in physical fitness improvement programs at school. This finding is in line with Kretschmer et al. (2023), who reported consistent gender differences in children's physical activity levels across nine countries, with girls generally being less active than boys regardless of national context; the authors relate this pattern partly to persistent socio-cultural norms that associate vigorous physical activity with masculinity, which can discourage girls from participating as freely as boys in sport and exercise. In the context of this study, similar dynamics may be at play: activities emphasizing strength, competition, or open display of the body are, in some community settings, still perceived as less appropriate for girls, and expressions such as "women are weak" or "it's not proper to run outside" continue to circulate, both explicitly and through everyday social cues.

Such perceptions have the potential to lower girls' confidence in physical education and, in some cases, contribute to self-consciousness about body shape or appearance during exercise. Because this study did not directly measure students' perceptions or psychosocial barriers, these explanations should be interpreted as plausible factors consistent with the broader literature (Kretschmer et al., 2023) rather than as findings established by the present data; a more targeted psychosocial or qualitative follow-up study would be needed to confirm them specifically among MTsN 2 Kediri Regency students.

4. CONCLUSION

Based on research on the physical fitness condition of students at MTsN 2 Kediri Regency using the Nusantara Student Fitness Test (TKPN), it can be concluded that the overall physical fitness condition of students is in the sufficient category. From a sample consisting of 67 students, there are 28 students (42%) who are included in the sufficient category, 20 students (30%) are in the good category, 12 students (18%) are in the very good category, and 7 students (10%) are classified as poor, while there are no students who are in the very poor category (0%). The results of this study indicate that most students have achieved a sufficient level of physical fitness to carry out daily activities, but still need to be developed to reach the good and very good categories.

In terms of gender, male students demonstrated superior levels of physical fitness compared to female students. Most male students were classified as good or very good, while the majority of female students were in the fair category. Furthermore, the cardiorespiratory endurance component, measured using the pacer test, showed the lowest results compared to other fitness components, making it a factor that requires extra attention in efforts to improve students' physical fitness.

Based on these findings, several concrete recommendations can be made for MTsN 2 Kediri Regency and similar schools. First, because cardiorespiratory endurance (measured through the pacer test) was the weakest component for nearly all students, schools are encouraged to allocate a specific portion of PJOK lessons, or a short structured routine outside class hours (e.g., 10–15 minutes of jogging, skipping, or interval running two to three times a week), specifically to build aerobic capacity rather than relying solely on the general 80-minute weekly PJOK session. Second, PJOK teachers can incorporate simple, low-cost cardio-based warm-up games, such as relay runs or continuous movement circuits, that fit within the limited class time while still targeting endurance. Third, given that female students showed comparatively lower fitness levels than male students, teachers are encouraged to design gender-inclusive activities that reduce competitive pressure and offer more comfortable participation options for girls, such as small-group or non-comparative exercise formats, in order to help narrow the fitness gap between male and female students. Fourth, schools may consider collaborating with parents to encourage physical activity outside school hours, given the limited time available for PJOK within the school's dense religious and academic schedule. Finally, periodic TKPN measurement, for example once each semester, is recommended so that schools can monitor whether these interventions are effectively improving students' cardiorespiratory endurance and overall physical fitness over time.

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hopes that this research can provide benefits for the development of science, especially in the field of physical education.

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