



Survey Of Physical Condition Of Karate Athletes At Dojo Jonggat Prestasi, Central Lombok Regency In 2022

Dimas Aditya Arrahman¹, *Muhammad Salabi², Muhsan³

*Corresponding Author: Muhammad Salabi, e-mail: muhamadsalabi@undikma.ac.id

¹Physical Education and Health Study Program, Faculty of Sport, Health, and Community Sciences, Universitas Pendidikan Mandalika, Mataram, Indonesia

Abstract

Objectives: This study aimed to determine the physical condition profile of karate athletes at Dojo Jonggat Prestasi, Central Lombok Regency, in 2022.

Materials and Methods: This study used a descriptive quantitative survey method. The participants were eight male karate athletes from Dojo Jonggat Prestasi aged 16–18 years. Data were collected using several physical fitness tests, including pull-up, sit-up, 30-meter sprint, hexagonal obstacle test, 1,200-meter run, sit and reach, and vertical jump. The data were analyzed using descriptive statistics and categorized based on predetermined physical condition norms.

Results: The overall physical condition of the athletes showed that one athlete was in the very good category, three athletes were in the good category, two athletes were in the moderate category, one athlete was in the poor category, and one athlete was in the very poor category. The strongest components were abdominal muscle strength, agility, endurance, and leg explosive power. However, speed and flexibility still required greater attention because several athletes were categorized as poor or very poor in these components.

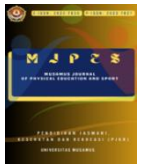
Conclusions: The physical condition of karate athletes at Dojo Jonggat Prestasi, Central Lombok Regency, in 2022 was generally categorized as good. Nevertheless, structured and continuous physical training programs are needed, especially to improve speed, flexibility, and overall physical balance among athletes.

Keywords: physical condition, karate, athlete, fitness test, Dojo Jonggat Prestasi

Introduction

Physical Education, Sports, and Health is an essential part of the school curriculum because it contributes to the development of students' physical, cognitive, social, and emotional abilities (Kuswoyo, 2020). Through physical education, students are not only encouraged to improve their movement skills, but also to develop discipline, cooperation, confidence, responsibility, and sportsmanship. Therefore, physical education should be designed to provide meaningful learning experiences through structured, enjoyable, and age-appropriate physical activities (Bailey, 2006).

Football is one of the most popular sports among elementary school students. It is widely practiced in school environments because it is easy to organize, enjoyable, and capable of developing various aspects of motor performance. Football involves dynamic movements such as running, changing



direction, controlling the ball, passing, shooting, and cooperating with teammates. For elementary school students, football learning can support the development of fundamental motor skills, coordination, agility, balance, and decision-making (Syahban & Hasniah, 2024).

The mastery of basic football skills is important because these skills form the foundation for students' ability to participate effectively in football games. Several essential technical skills in football include dribbling, short passing, throw-in, running with the ball, heading, and shooting (Kuswoyo & Donggoran, 2019). Each skill has a specific function in the game. Dribbling allows players to control and move the ball past opponents. Short passing supports teamwork and ball circulation. Throw-in is used to restart play from the sideline. Running with the ball requires speed and coordination while maintaining possession. Heading is used to direct the ball in the air, while shooting is essential for creating scoring opportunities (Ardiyanto, 2021).

At the elementary school level, students' football skill levels may differ because of variations in practice experience, physical condition, motivation, learning opportunities, and teacher instruction. Some students may show good performance in simple or frequently practiced skills, while others may still experience difficulty in skills requiring accuracy, coordination, and technical control. Therefore, assessment is needed to identify students' current skill levels and determine which components require further improvement.

Based on this background, this study aimed to assess the basic football skill levels of fifth-grade students at SD Negeri 4 Cakranegara in 2025. The assessment covered dribbling, short passing, throw-in, running with the ball, heading, shooting, and overall football skill performance. The results of this study are expected to provide useful information for physical education teachers in designing more effective football learning activities, especially by focusing on the technical components that remain weak among students.

Materials and Methods

Study Design

This study used a descriptive quantitative approach with a survey method. The purpose of this design was to describe the physical condition profile of karate athletes based on several physical fitness components.

Study Participants

The participants in this study were eight male karate athletes from Dojo Jonggat Prestasi, Central Lombok Regency. The athletes were aged between 16 and 18 years. The participants were selected because they were actively involved in karate training at the dojo.



Study Organization

The physical condition test consisted of several components. Arm muscle strength was measured using the pull-up test. Abdominal muscle strength was measured using the sit-up test. Speed was measured using the 30-meter sprint test. Agility was measured using the hexagonal obstacle test. Endurance was measured using the 1,200-meter run. Flexibility was measured using the sit and reach test. Leg explosive power was measured using the vertical jump test.

Each test result was classified into five categories: very good, good, moderate, poor, and very poor. The classification was based on the physical condition norms used in the study.

Statistical Analysis

The data were analyzed using descriptive statistics, including frequency, percentage, mean score, maximum score, and minimum score. The results were presented in tables to describe the physical condition profile of the athletes in each test component.

Results

Characteristics of Participants

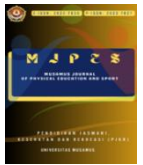
Table 1. Characteristics of Karate Athletes

No.	Name	Gender	Age
1	Adam Gazali	Male	18
	M. Reza	Male	18
3	Fahmi Ramdani	Male	17
	Teguh Arman	Male	17
5	Yuda Pratama	Male	17
6	Zidni Arrahman	Male	16
7	M. Bayu Kisnanigam	Male	16
	M. Andika Pratama	Male	16

Arm Muscle Strength

Table 2. Distribution of Pull-Up Test Results

Category	Norm Range	Frequency	Percentage
Very Good	>13	0	0%
Good	9–13	5	62.5%
Moderate	6–8	1	12.5%



Poor	3–5	0	0%
Very Poor	<3	2	2%
Total		8	100%

The pull-up test showed that most athletes were in the good category. However, two athletes were still in the very poor category, indicating that arm muscle strength should still be improved.

Abdominal Muscle Strength

Table 3. Distribution of Sit-Up Test Results

Category	Norm Range	Frequency	Percentage
Very Good	>30	3	37.5%
Good	26–30	4	50%
Moderate	20–25	0	0%
Poor	17–19	1	12.5%
Very Poor	<17	0	0%
Total		8	100%

The sit-up test showed that abdominal muscle strength was one of the strongest components among the athletes, with most athletes categorized as good or very good.

Speed

Table 4. Distribution of 30-Meter Sprint Test Results

Category	Norm Range	Frequency	Percentage
Very Good	<4.0 seconds	1	12.5%
Good	4.0–4.2 seconds	0	0%
Moderate	4.3–4.4 seconds	1	12.5%
Poor	4.5–4.6 seconds	6	75%
Very Poor	>4.6 seconds	0	0%
Total		8	100%

The speed test showed that most athletes were in the poor category. This indicates that speed is one of the main physical components that needs to be improved through specific training.

Agility

Table 5. Distribution of Hexagonal Obstacle Test Results

Category	Norm Range	Frequency	Percentage
Very Good	<11.2 seconds	0	0%
Good	11.2–13.3 seconds	6	7%
Moderate	13.4–15.5 seconds	1	12.5%
Poor	15.6–17.8 seconds	0	0%
Very Poor	>17.8 seconds	1	12.5%
Total		8	100%

The agility test showed that most athletes were in the good category. This result indicates that the athletes had relatively good ability to change direction quickly.

Endurance

Table 6. Distribution of 1,200-Meter Run Test Results

Category	Norm Range	Frequency	Percentage
Very Good	<03:04.00	0	0%
Good	03:05.00–03:53.00	5	62.5%
Moderate	03:54.00–04:46.00	2	25%
Poor	04:47.00–06:04.00	1	12.5%
Very Poor	>06:05.00	0	0%
Total		8	100%

The endurance test showed that most athletes were in the good category. This suggests that the athletes had adequate cardiovascular endurance to support karate training and competition.

Flexibility

Table 7. Distribution of Sit and Reach Test Results

Category	Norm Range	Frequency	Percentage
Very Good	>17.9 cm	0	0%
Good	17.0–17.9 cm	1	12.5%
Moderate	15.8–16.9 cm	3	37.5%
Poor	15.0–15.7 cm	2	25%
Very Poor	<15.0 cm	2	25%
Total		8	100%

The flexibility test showed that several athletes were still in the poor and very poor categories.

This component needs improvement because flexibility supports kicking, body control, and movement efficiency in karate.

Leg Explosive Power

Table 8. Distribution of Vertical Jump Test Results

Category	Norm Range	Frequency	Percentage
Very Good	>65 cm	1	12.5%
Good	50–65 cm	5	62.5%
Moderate	40–49 cm	2	25%
Poor	30–39 cm	0	0%
Very Poor	<30 cm	0	0%
Total		8	100%

The vertical jump test showed that most athletes had good leg explosive power. This is important because explosive power supports fast kicking, jumping, attacking, and defensive movement in karate.

Overall Physical Condition

Table 9. Overall Physical Condition Category

Category	Frequency	Percentage
Very Good	1	12.5%
Good	3	37.5%
Moderate	2	25%
Poor	1	12.5%
Very Poor	1	12.5%
Total	8	100%

Overall, the physical condition of the karate athletes at Dojo Jonggat Prestasi was categorized as good. However, not all physical components were evenly developed. Speed and flexibility were the components that required the greatest improvement.

Discussion

The findings of this study show that the overall physical condition of karate athletes at Dojo Jonggat Prestasi was generally in the good category. This result indicates that the athletes already had a sufficient physical foundation to support karate training. However, the distribution of results also shows that several components still need specific attention, particularly speed and flexibility.

Arm muscle strength was mostly categorized as good, although some athletes were still in the very poor category. In karate, arm strength is important for punching, blocking, maintaining guard position, and controlling body movement during *kumite*. This finding is in line with Purwanto, Yuwono, and Purwanto (2013), who explained that physical condition and basic technical skills are important



components in karate performance. Therefore, athletes with weaker arm strength require additional upper-body strength training.

Abdominal muscle strength showed better results, with most athletes categorized as good and very good. Strong abdominal muscles are important in karate because they support posture stability, balance, rotational movement, and force transfer during punching and kicking. Similar findings were reported by Mustofa and Sahri (2022), who found that core strength is one of the important components in the physical profile of karate athletes. Good abdominal strength allows athletes to maintain balance and perform techniques more effectively.

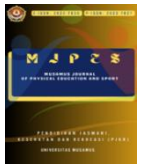
The speed test showed that most athletes were in the poor category. This is an important finding because speed is one of the dominant components in karate, especially in attacking, counterattacking, and avoiding an opponent's movement. Previous research by Gultom (2019) emphasized that speed is an essential physical component for karate athletes because the sport requires rapid movement responses. Therefore, sprint training, reaction drills, and sport-specific speed exercises should be included more consistently in the training program.

Agility was one of the better components in this study, with most athletes categorized as good. Agility is highly relevant to karate because athletes must be able to change direction quickly, maintain body balance, and adjust movement according to the opponent's actions. This finding supports Kadir et al. (2022), who stated that agility is one of the key components in evaluating the physical condition of karate athletes. Good agility allows karate athletes to move efficiently during both attack and defense.

Endurance was also generally categorized as good. This result indicates that most athletes had adequate cardiovascular capacity to perform repeated movements during training or competition. Endurance is important in karate because athletes must maintain movement quality throughout the match. This finding is consistent with Prima and Kartiko (2021), who stated that endurance is one of the main physical components needed by athletes in various sports.

Flexibility was one of the weakest components in this study. Several athletes were categorized as poor and very poor. In karate, flexibility is important for performing kicks, avoiding injury, and increasing movement range. Low flexibility can limit technical performance, especially in high kicks and dynamic movements. Sari (2018) also found that flexibility is an important component in the physical condition profile of karate athletes. Therefore, flexibility training should be included regularly through dynamic stretching, static stretching, and mobility exercises.

Leg explosive power was mostly categorized as good. This component is important in karate because powerful leg muscles support kicking, jumping, acceleration, and quick directional changes. This finding is supported by Rejeki (2022), who explained that biomotor components, including explosive



power, are important in designing karate physical training models. Athletes with good leg explosive power are more likely to perform faster and stronger attacking movements.

Overall, the results indicate that the athletes' physical condition was generally good, but the training program still needs improvement. Coaches should not only maintain the components that are already good, such as agility, endurance, abdominal strength, and leg explosive power, but also focus on weaker components such as speed and flexibility. A balanced and systematic training program is needed so that all physical components develop proportionally.

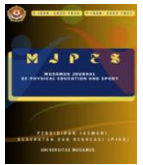
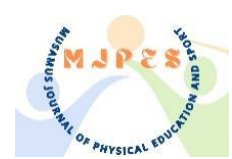
Conclusions

Based on the results of the study, the physical condition of karate athletes at Dojo Jonggat Prestasi, Central Lombok Regency, in 2022 was generally categorized as good. The athletes showed relatively strong performance in abdominal muscle strength, agility, endurance, and leg explosive power. However, speed and flexibility still need to be improved because several athletes were categorized as poor or very poor in these components.

Therefore, coaches are advised to design more structured, regular, and specific physical training programs. Training should include speed drills, flexibility exercises, strength training, agility training, endurance training, and explosive power development. A well-planned training program is expected to improve the physical condition of athletes and support better karate performance in future competitions.

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