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Analysis Of Physical Condition Test Results Of Karate Athletes In PPLP Athletes Of Gorontalo Province In 2024 And 2025

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Abstract. The study's suggestions include determining the differences in physical condition test results between karate kata and kumite athletes from PPLP Gorontalo Province and the percentage of participants in these tests. Additionally, this study assesses the results of yearly karate kata and kumite tests that are held between 2024 and 2025. This study found that there was an average 0.12% increase in the Bleep test in 2024–2025. Male and female karate practitioners doing kata and kumite at PPLP Gorontalo Province were examined physically, and the findings are displayed. The average gain in the 20-meter running test from 2024 to 2025 was 1.27%. In the 20-meter running test, the average increase between 2024 and 2025 was 1.27%. The 2024–2025 push-up test saw an average increase of 75%, while the 2024–2025 300-meter running test saw an average improvement of 82.72%. The average increase in the 2024–2025 Sit Up Test was 14.41%, whilst the average decrease in the 2024–2025 Bleep Test, which evaluates the physical test results of male karate athletes competing in the PPLP Gorontalo Province's kata and kumite divisions, was 4.35%. The results of the PPLP Gorontalo Province's physical condition test in 2024–2025 revealed a shift, with the push-up test rising by an average of 28.67%, the sit-up test staying at an average of 26.40%, the 20-meter running test increasing by an average of 2.78%, and the 300-meter running test increasing by an average of 8.16%. The largest changes were observed in the results of the Bleep test, the 20-meter running test, the 300-meter running test, and the sit-up and push-up tests.

Keywords: Kata, Kumite, Physical Condition, PPLP Gorontalo.

1 Introduction

In Javanese, the word "sport" is "olahrago." "Rogo" means body, and "olah" means to develop oneself to become proficient. Sport, then, is a kind of education for both individuals

and communities that emphasizes deliberate and methodical physical motions toward greater standards of excellence. Sport is a systematic, regular physical activity that includes a wide range of motions. It is frequently practiced by members of the public and is played in contests for different age groups.

According to Purnomo et al. (2020), sports are engaging and pleasurable. Exercise is crucial for maintaining one's physical and spiritual well-being and, eventually, for reaching one's full physical potential (Ozcan et al., 2018).

Sport is also a systematic and regular physical activity that includes a wide range of motions. It is frequently practiced by members of the public and competed in by different age groups. In order to obtain ideal responses, triumph, and success, sport—a type of physical fitness—involves games, races, contests, and non-intensive physical exercises (Batra et al., 2021).

It is commonly known that one of the many sports, especially martial arts, that have been developed in Indonesia for a long time is karate. Additionally, karate is a sport that is played both domestically and abroad. Karate's popularity in Indonesia is demonstrated by the rise of several karate groups from different schools, each with its own founder. Japan is where the martial art of karate originated. It was imported to Japan through Okinawa. This martial art was formerly referred to as "Tote," which means "Chinese Hand." In order to make the Okinawan kanji (Tote: Chinese Hand) more appealing to the Japanese public at a period of peak Japanese nationalism, Sensei Gichin Funakoshi translated it to "karate" (Empty Hand). The two kanji used in karate are "Kara," which means "empty," and "te," which means "hand." When combined, the two kanji represent "empty hand."

The Japanese Karate Federation is the body that regulates karate in Japan. Previously known as the World Union of Karatedo Organizations, or WUKO, the WKF is the organization that represents karate across the world. Another organization that represents traditional karate is the International Traditional Karate Federation, or ITKF. Unlike the contact-based forms of Kyokushin and Daidojuku, the JKF and WKF are primarily used to promote non-contact karate.

In the history of the Japanese Karate Association (JKA) and the Japanese karate community, October 20, 1957, was a significant date. Japan's inaugural tournament was decided to be held in Tokyo. Just 12 years after losing the war, Japan was able to stage such a significant event, which astounded the world. Enhancing all aspects of physical fitness is necessary for improving athletic performance, especially in karate, where success depends on having the best possible physical condition. In the words of Sajoto (1988:57), "physical fitness is a crucial prerequisite for improving an athlete's performance; it can even be considered the starting point for any successful sport."

Each and every aspect of karate incorporates physical training. The first step in kihon, kata, and kumite training is taiso, or stretching or warming up. Given that taiso helps to avoid injury, this is done to best prepare every body area for upcoming exercise. The name "kara" means "empty," and "te" means "hand." Karate was first developed as a sport to keep people active and fresh by using empty hand motions. Thus, practicing karate is not just about competing in sports; it's also about increasing physical fitness and health.

Physical fitness still has to be enhanced, according to observations made at the Education Training Center for Physical Education (PPLP) in Gorontalo Province. This is predicated on information gathered from actual trainers. Tests and measures can be used to

assess how much an athlete's physical condition has improved. A measurement is a quantifiable score obtained from the test, whereas a test is a way to gather data to get knowledge about a person or item (Widiastuti, 2019). Karate, like other sports, demands optimal physical fitness. Speed, muscular explosiveness or power, endurance, flexibility, strength, and balance are the main elements of physical fitness in karate (Muhammad, 2019). The development of Karate in Gorontalo Province is very large, especially the KATA number, this can be seen from the achievements at the international level in 2024, one of the PPLP athletes from Gorontalo Province won the championship at the World event in the Cadet category.

An athlete's performance will be less supported if their physical condition is poor. (TEGAR PRAMONO, 2019). Being physically fit is necessary to succeed in sports. Sujiono (2021) asserts that physical condition is an essential element for both maintenance and improvement. In order to improve short-distance running performance, coaches need to take into account the following physical attributes: power, strength, flexibility, endurance, and speed.

According to Beck and Grabowski (2018), physical training needs to be done in a methodical, consistent, and efficient manner while following to numerous advancements in training concepts and techniques that are suitable for the athlete. Enhancing technical, mental, and physical potential is the goal of the training program (Febriyanto et al., 2016). This training program's objective is to increase quality through gradual, long-term development. In order to comprehend the modifications made to physical examinations using test items that stay the same every year, this research concentrated on kata and kumite athletes from the Gorontalo PPLP (Indonesian National Sports Committee). The Gorontalo PPLP (Indonesian Karate Federation Youth League) provides a great opportunity to develop the potential of its top talent, and its accomplishments have increased year after year, which forms the basis for this research. This is necessary to comprehend the improvement in the results of the 2023 National Sports Week (POPNAS) and the gold medal won by one athlete at the World Karate Federation Youth League World Championships held in Fujairah. The Gorontalo PPLP intends to comprehend the findings of the athlete's physical condition tests from 2024 to 2025 based on this research. As a consequence, players may use these outcomes as a guide to make sure they do well in the upcoming major tournament.

The aforementioned data highlights how crucial it is for athletes to be in good physical shape since it enhances their performance. Therefore, in order to ascertain whether an athlete's performance improves or deteriorates, tests and measures must be carried out to ascertain the athlete's physical state. (Widiastuti, 2015) asserts that measures and tests are instruments for gathering data or information about the desired outcome. Tests are devices or gadgets used to gather data about items or athletes Measurements and tests are frequently used interchangeably and undoubtedly have different meanings. A measurement is the process of gathering information, usually in the form of numerical data, whereas a test is a tool used to gather information about a person or item. Determining status, group categorization, selection, motivation, upholding norms, procedures, introspection, and research interests are the goals of tests and assessments themselves. Every sport has various physical requirements, necessitating different testing and measures. Coaches, athletes, and sports organizations can use tests and measurements to assess the level of physical condition (Kemala, 2019).

Coaches will benefit immensely from structured and frequent testing and measurements. Reliable test instruments and skilled testers are required to produce meaningful test data outcomes. Tests and measures are among the most crucial strategies to promote Indonesian sporting accomplishments, particularly in every city and regency, claims Paulus

Hendro Titirloloby (2021). In many towns and regencies, the absence of athlete lab data is an issue. To solve this problem, adjustments are required. Measurement instruments having a high degree of validity are necessary to get accurate results.

The author's motivation to conduct the study was sparked by the background information presented above, which included physical test results for Gorontalo PPLP kata and kumite contestants. In order to better understand the physical condition test results of the Gorontalo PPLP 2022–2023 kata and kumite competitors, this research was conducted. This will help you understand the results of your workouts.

2 Method

A quantitative research approach was used in this investigation. The researchers used the ex-post facto method, which makes use of secondary data, in the study.

Athletes' physical test results from 2024 and 2025 were examined by the researchers. During those two years, they sought to ascertain if karate had changed or remained stable. This study looked at changes in physical attributes including strength, speed, and endurance.

A research variable is a quality or value of a person or thing that has specific changes chosen by the researcher in order to examine it and make inferences, according to Sugiyono (2010).

Data was gathered by researchers using the following tests:

1. Bleep Test
2. 20M Sprint
3. 300M Run
4. Push-up Test
5. Sit-up Test

3 Result

The researchers in this study reprocessed the data using the ex-post facto procedure. To comprehend changes in the data from two distinct years, average and percentage figures were created using Microsoft Excel.

Data Description Table 1: Based on the annual average for female karate athletes in 2024 and 2025

Average test	2024	2025
Bleep Test	34,15	34,19
Sprint 20M	3,94	3,99
300m run	33,3	60,95
Push Ups	26,4	26,4
Sit Ups	33,3	38,1

Data Description Table.1 Based on the annual average of male karate athletes, namely 2024 and 2025

Average test	2024	2025
Bleep Test	46	44
Sprint 20M	3,6	3,5
300m run	49	53
Push Ups	45	32,1
Sit Ups	41,67	52,67

Based on Table 1, the description of the testing system shows:

1. The average Bleep Test in 2024 was 34.15, and in 2025 it was 34.19. These results indicate that the average VO2 Max increased from 2022 to 2023.
2. The average 20-meter dash time in 2024 was 3.94 seconds, and in 2025 it was 3.99 seconds. These results indicate that the average 20-meter dash time increased from 2024 to 2025.
3. The average 300m dash time in 2024 was 33.3 seconds, and in 2025 it was 60.95 seconds, with the average time increasing.
4. The average push-up test in 2024 was 26.4, and in 2025, the average remained at 26.4, indicating a steady increase.
5. The average sit-up test in 2024 was 33.3, and in 2025, it was 48.1, indicating an increase.

Based on Table 2, the description of the testing system shows:

1. The average bleep test in 2024 was 46, and in 2025, it was 44. These results indicate that the average VO2max decreased from 2024 to 2025.
2. The average 20-meter dash test in 2024 was 3.6, and in 2025, it was 3.5. These results indicate that the average 20-meter dash time decreased from 2024 to 2025.
3. The average 300m run time in 2024 was 49 seconds, and in 2025 it was 53 seconds, with an increase in the average time.
4. The average push-up test in 2024 was 45 seconds, and in 2025 it was 32.1 seconds, indicating a decrease.
5. The average sit-up test in 2024 was 41.67 seconds, and in 2025 it was 52.67 seconds, indicating an increase.

The percentage of women's physical fitness increases annually.

Based on the figure, it can be seen that all of the following tests:

1. In 2024–2025, the average bleep test dropped by 0.12%.
2. In 2024–2025, the average 20-meter test rose by 1.27%.
3. In 2024–2025, the average increase in the 300-meter test was 82.72%.
4. In 2024–2025, the average push-up test increased by 75%.
5. In 2024–2025, the average sit-up test increased by 14.41%.

The percentage of men's physique increases annually. Based on the figure, it can be seen that all of the following tests:

1. The average decline in the bleep test during 2024–2025 was -4.35%.
2. There was an average drop of 2.78% in the 20-meter test in 2024–2025.
3. In 2024–2025, the average increase in the 300-meter test was 8.16%.
4. In 2024–2025, the average push-up test score rose by 28.67%.
5. There was a 26.40% rise in the average sit-up test score in 2024–2025.

4 Discussion

The physical state of an athlete can be used to gauge their level of performance. Performance will be improved by physical training that is specific to the sport. Enhancing an athlete's potential and talents while developing their biomotor skills from the lowest to the greatest level is the aim of physical training (Goodman et al., 2006). Strength, speed, balance, coordination, and response time are examples of physical components. Karate athletes employ the 20-meter running test, the 300-meter run, the bleep test, the sit-up test, and the push-up test as exam components.

According to the table findings, there was an average yearly growth in the number of karate athletes taking part in the MFT, the 2024–2025 PPLP Gorontalo karate program, between 2024 and 2025. Additionally, scores for the 30-meter run test decreased between 2024 and 2025. The findings of an average rise in the Bleep test from 2024–2025 demonstrate that the physical condition of karate athletes has improved in 2024–2025, as seen by the Leg Muscle Strength test. The data indicate an average rise in the 300-meter running test from 2024 to 2025. Additional tests that demonstrate an improvement in the PPLP Gorontalo karate branch athletes' push-up and sit-up performance indicate an average rise from 2024–2025.

5 Conclusion

The study findings and discussion allow for the following deductions to be made:

1. In 2024–2025, the physical test results of female karate athletes changed. The push-up, sit-up, and 300-meter tests produced the most notable test findings.
2. The physical test results of male karate athletes in 2024–2025 showed alterations. The push-up, sit-up, 300-meter, and 20-meter tests produced the most notable test findings.

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