

Survey of The Physical Condition Level of Male and Female Karate Athletes

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Abstract

Background and aim. Physical condition is a crucial factor influencing athletes' performance in karate, as it supports the execution of techniques, tactics, and overall endurance during competition. However, preliminary observations at the Pemouthan dojo indicated that some athletes still experienced limitations in endurance, muscle strength, and kicking power. Therefore, this study aimed to describe the level of physical condition of karate athletes at the Pemouthan dojo.

Methods. This study employed a descriptive research design. The population consisted of 30 karate athletes, with a sample of 10 male athletes selected using a total sampling technique. Data were collected through observation, documentation, and physical condition tests, including sit-ups, push-ups, standing long jump, sit and reach, and beep test. The data were analyzed using descriptive statistics based on predetermined scoring categories.

Results. The findings showed that the overall physical condition of karate athletes at the Pemouthan dojo was categorized as sufficient, with an average score of 4.4 and a percentage of 90% within the "sufficient" category. This indicates that although athletes possess basic physical capabilities, their performance components such as endurance, strength, flexibility, and power still require improvement.

Conclusions. The physical condition of karate athletes at the Pemouthan dojo is adequate but not yet optimal. Therefore, structured and continuous training programs focusing on improving physical fitness components are necessary to enhance athletes' performance and competitive achievement.

Keywords: *Athletes; Karate; Physical Condition.*

1. Introduction

Exercise is a physical activity that moves parts of the body to be healthy and fit, in addition to sports that can ensure the safety and welfare of oneself and the general public which is a way of self-defense. The sport in question is martial arts, in general martial arts are intended to defend themselves or to defend themselves from enemy attacks. Various types of martial arts in the world have become sports that are not only for recreation and health but also for achievement sports.

Karate martial arts can be done anywhere and anytime, because this sport does not need to use special tools, karate has developed so that there are many regional, national, and international championships. Usually small championships such as in elementary, junior high, high school, and college and in the end can continue to the PORDA,

POMNAS, O2SN, POPNAS, PON, SEA GAMES and the Olympics.

The rapid development of sports at this time requires careful handling and preparation. This needs to be done so that the ideals of the children of the entire Indonesian nation, namely physically and spiritually healthy human beings through sports, can be realized. Sport is all activities that are systematic, encourage, give and develop physical, spiritual and social potential. Through sports activities, people can help their personal growth and development to overcome the shortcomings experienced and understand the values of life that are very valuable, in accordance with the development of sports that develop into sports achievements.

Karate is a mighty art for personality development through practice so that karate-ka can overcome every obstacle, real or unreal. Karate is actually a hand-to-hand martial art where the hands and feet are trained systematically so that sudden attacks from the enemy can be controlled by displaying some strength, no different from using the right weapons. In this case, karate is one of the sports that is compared both regionally, nationally, regionally and internationally. Starting from early age, adolescence, and adulthood. An athlete's success in the match is not only influenced by technique, mentality, and tactics. However, it is also influenced by the quality of physical condition.

In several prestigious events, both regional championships and provincial and national championships, Pemouthan dojo athletes were able to contribute medals for the team in several of these events. The Pemulitan Dojo was first formed into a karate club called Wadokai in 2010 at SMP Negeri 1 Pemouthan. Karate is a martial art that aximizes all the gestures to perform deadly attacks. In supporting this, all karate sports require good physical condition. There are several kinds of physical conditions that are needed, namely agility, speed, balance, flexibility, and good endurance.

Physical condition is the state of a person's body that is able to maximize the use of strength, speed, agility, balance, flexibility and endurance properly. A good physical condition will affect psychological aspects in the form of work motivation, work morale, confidence, and so on.

2. Materials and Method

This research uses Sugiyono's (2012:11) descriptive research, which is a research that aims to determine the value of independent variables, be it one or more variables so that there is no need to compare or connect between one variable and another.

According to Sugiyono (2012:90), population is a generalized area in which it consists of objects and subjects that have certain qualities and characteristics so that researchers can determine to study and then draw conclusions. The population in this study is male and female karate athletes in the Pemouthan dojo, which totals 30 people.

According to Sugiyono (2012:91), the sample is part of the amount owned by the population. The sample in this study uses a full sampling technique, meaning that the entire population is sampled.

Psychologically, a good physical condition has a great impact on the environment of our daily activities and also especially in sports.

An athlete will produce good achievements if he has a good physical condition and does not experience a big decline. In order to maintain physical condition, athletes must maintain the intake that is put into the body either through food, drinks and enough rest so that athletes do not get tired easily in undergoing training and the matches they face. In addition, the role of a coach also greatly affects the physical condition of this karate martial arts athlete.

A necessary thing that needs to be fostered to achieve good achievement is by fostering physical condition Harsono (1997:3) said that "if the physical condition is good, then he will quickly master the movement techniques to be trained". The technique referred to here is to master the movement techniques needed for sports carried out by athletes. In addition to physical condition, another factor that is trained is mental.

Based on the observations I made on karate athletes at the Pemouthan dojo, I can describe the things that are seen when they do exercises such as, 1) there are still athletes who do not have good physical endurance so that they quickly feel tired, 2) lack of endurance of the arm muscles when doing punching techniques, 3) when doing kicks it looks like they have less power. This made me interested in doing research at the Pemouthan dojo.

Considering that the population is only small, the researchers who sampled in this study were 10 male athletes.

To avoid misunderstandings or interpretations, the researcher provides an explanation of the important terms in this research, including the following:

Physical Condition

Physical condition is a basic ability that is composed of components that become a whole unit both in its improvement and maintenance in a directed and systematic manner.

Karate

Karate is composed of two words, namely kara and te which literally kara means empty and te means hand so that when combined it will form an empty hand word which gives the meaning that

karate is a martial sport that maximizes all gestures to defend oneself from threats, either in the form of evasion or parry and carry out deadly attacks.

The development of instruments is a guide for the implementation of a test, which has a lot of influence on the objectivity, skill and accuracy of a test. Instruction 24 for the implementation of a test is an explanation of how the test should be carried out and how to give a score. (Koni, 2003:20).

Karate Sports Physical Condition Component Test Crunches

People try to sleep on their backs, hands are intertwined behind their heads, both legs are folded so that they form a 90° angle A maid holds both ankles tightly and presses them when the person tries to stand up. The person tries to get up so that it is in a sitting position and both elbows are applied to both knees and then he returns to the original posture. Do this movement repeatedly and continuously, until the person tries to not be able to lift his body anymore, pay attention to the posture of the legs always forming a 90° angle when doing the Sit-Up.

Score:

The correct number of Sit-Up movements, which people can try.



Figure 1. Sit-Up (activemovement.net)

Table 1. Convert the value of each physical condition

Category	Value conversion
Perfect	10
Very good	8
Good	6
Enough	4
Less	2

Push-Ups

People try to lie down in a concave posture, both hands are folded at the sides of the body, both hands press the floor and straighten, so that the body is lifted, while the posture of the body and legs form a straight line. After that, the body is lowered by bending the arms at the elbows, so that the chest touches the floor. Do these movements

repeatedly and continuously until people try to get their bodies to stop.

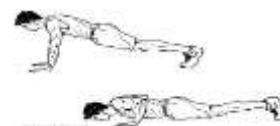


Figure 2. Push-Ups (activemovement.net)

Table 2. Convert the value of each physical condition

Category	Value conversion
Perfect	10
Very good	8
Good	6
Enough	4
Less	2

Children stand behind the boundary line, feet at the same time as the knees bent, hands at the sides of the feet. The child swings his arms back and forth and jumps as far as possible to land with both feet together. Each child is given the opportunity to have 3 (three) attempts

Score:

The child's result is measured from the previous landing of the body or limb closest to the starting line, the value that the child is allowed to be the farthest jump distance obtained from the three jumps in centimeters (cm)



Figure 3. Illusion of the standing board jump test

Table 3. Convert the value of each physical condition

Category	Value conversion
Perfect	10
Very good	8
Good	6
Enough	4
Less	2

The child sits on the mat with the legs straight and open shoulder-width apart, the soles of the feet are perpendicular to the mat, the heel position does not exceed the outer line of duct tape. The palm of the left hand is placed on the back of the right hand

with the position of the fingers of the hand aligned. Bend and push your body far forward with both hands and knees straight. The knee should not be bent during the test. The soles of the feet are kept perpendicular to the mat, maintaining that position for 3 seconds.

The farthest range that a child can reach from two attempts, measured in cm.



Figure 4. Sit and reach (activemovement.net)

Table 4. Convert the value of each physical condition

Category	Value conversion
Perfect	10
Very good	8
Good	6
Enough	4
Less	2

The child must stand at point A, when the first beep is sounded, start running towards point B. You must reach point B before the second beep is sounded. After reaching point B, run as fast as possible back to point A before the third beep sounds, this is a one-time turn. At first the beep will sound quite slow but the longer the beep will become the faster, if the child cannot reach the point before the beep is heard the test will be considered complete and the last score is recorded.

3. Results and Discussion

Results

Based on the results of data analysis, the level of physical condition of karate athletes at the Pemouthan dojo was categorized as generally sufficient. Out of a total of 10 athletes, 9 athletes (90%) were classified in the “sufficient” category, while 1 athlete (10%) showed a higher category. The overall average score of athletes’ physical condition was 4.4, which falls within the interval range of 4.0–5.9, indicating a moderate level of physical fitness.



Figure 5. Beep test instruction (bugaraga.com)

Table 5. Convert the value of each physical condition

Category	Value conversion
Perfect	10
Very good	8
Good	6
Enough	4
Less	2

Table 6. Notation into Physical Condition Status Categories

Score range	Ability Categories
9,6 – 10	Perfect
8,0 – 9,5	Very Good
6,0 – 7,9	Good
4,0 – 5,9	Enough
2,0 – 3,9	Less

Data Collection Techniques

The method in this study is an observation method, in order to describe the state of the Physical Condition of Altet Karate in the Pemmouthan dojo. The techniques used in this study are:

Observation, which was carried out before the proposal was made and carried out by direct observation at the research site.

Libraries are a way of collecting data by editing supporting theories from literature books in the library. Tests and measurements, in this study a test was carried out to measure the Physical Condition of Karate Athletes at the Pemouthan dojo

The measurement of physical condition was obtained through several test components, including abdominal muscle endurance (sit-up), arm and shoulder muscle endurance (push-up), leg power (standing broad jump), flexibility (sit and reach), and aerobic endurance (beep test). The results show that most athletes demonstrated adequate performance across these components, although some aspects such as endurance and explosive power still require improvement.

Overall, the findings indicate that although athletes possess a basic level of physical fitness, their physical condition has not yet reached an optimal or competitive level. This condition

Discussion

The results of this study indicate that the physical condition of karate athletes at the Pemouthan dojo is predominantly in the sufficient category. This finding suggests that athletes have a basic level of fitness that supports training activities, but it is not yet optimal for achieving high-level performance in competitions. Physical condition plays a crucial role in supporting technical execution, tactical performance, and psychological readiness in martial arts such as karate.

The dominance of the sufficient category (90%) reflects that training programs implemented so far may not fully address the development of all physical components, such as endurance, strength, flexibility, and explosive power. According to previous studies, optimal physical condition significantly influences athletes' ability to perform techniques effectively and consistently during matches. Athletes with better physical fitness tend to have greater stamina, faster reaction times, and stronger execution of techniques.

4. Conclusion

Based on the analysis of the data that has been carried out, it can be concluded that this study is the level of physical condition of Pemouthan karate

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reflects the need for more structured and systematic training programs to enhance overall athletic performance.

In addition, the results highlight that some athletes still experience limitations in endurance and muscle strength. This is consistent with observations that athletes may feel fatigue quickly during training or competition, which can reduce performance quality. Therefore, improving training programs by incorporating structured physical conditioning, including strength training, endurance exercises, and flexibility routines, is essential.

Furthermore, the role of coaches is very important in designing systematic and progressive training programs. A well-planned training program can help athletes improve their physical condition gradually and consistently. Continuous evaluation through periodic testing is also necessary to monitor athlete development.

In conclusion, although the athletes' physical condition is adequate, it still needs to be improved to achieve optimal performance. Enhancing training intensity, program variation, and consistency will be key factors in improving athletes' overall physical fitness and competitive achievement.

dojo athletes in the sufficient category, namely with a sample of 10 athletes with a percentage of 90% of the total conversion with an average of 4.4.

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