

Analysis of the Physical Condition of Pasuruan Finswimming Athletes

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ABSTRACT

The focus of this study was to determine and analyze the level of physical condition possessed by diving athletes in Pasuruan. The data obtained will be used as material for development and a benchmark for physical conditions that divers must own at the provincial level in other regions. This study used a quantitative descriptive approach with a total sample of 19 athletes consisting of seven males and 12 females. The tests were carried out collectively at GOR KONI, Pasuruan Regency. Data collection techniques used are tests and measurements of abdominal muscle strength (30 seconds sit-ups), power of leg (Standing board jump), flexibility (Sit and Reach), Vo2Max Endurance (Multi-Stage Fitness Test). The physical condition of the Pasuruan finswimmer athletes was dominated by the moderate category with nine athletes, then the excellent category with eight athletes, then the less category with one athlete, as for athletes with excellent conditions totaling one athlete. From the research, it can be concluded that the physical condition of the Pasuruan district finswimming athlete is included in the moderate category.

Keywords: Analysis, Finswimming, Physical condition.

1. INTRODUCTION

Sports activities, without realizing it, have become a tradition and a habit everywhere. This activity is closely related to the movement to process the body through a structured and measurable movement. Some people have realized that exercising has many benefits, one of which is a good level of physical fitness. Sport is a systematic process through all activities and efforts that can encourage, develop, generate and foster a person's physical to spiritual potential as an individual or group of people with games, competitions, to intensive physical activities to obtain recreation and victory [1]. The sport itself, through the National Sports System Law number 3 of 2005, is divided into three pillars, the first is educational sports, achievement sports, and the last is recreational sports. In achievement sports, it is stated that this sport is a coaching and development activity for athletes or specifically called athletes with programmed, tiered, and sustainable through a competition. In its preparation, achievement sports are not only about a good and measurable exercise program but are also closely related to several other determining factors. From

nutritional adequacy, physical ability, good movement, controlled mental state to athletes who must be prepared for their best performance when entering the competition. According to [2], In sports, the achievement is to get the highest achievement. This means that there needs to be a synergistic effort between various fields, dominant science, and technology, to increase achievement in the sports field.

Finswimming is one of the achievement sports included in the sports list at the Komite Olahraga Nasional Indonesia (KONI) through its association Persatuan Olahraga Finswimming Seluruh Indonesia (POSSI). This sport competes in two different places, namely pool diving and sea diving. In pool diving, several numbers are competed based on [3] among them are the number of surface finswimming, apnea finswimming, immersion finswimming, and bins. Finswimming is a speed sport where the foot with the fins acts as the main factor. In the implementation process, finswimming uses monofin or biffin, but the concept of the competition refers to and

adopts the same as a swimming competition. Physical condition is one of the important factors found in almost all achievement sports. Physical condition is the extent to which the athlete's ability level can survive and exert all his body's abilities when doing sports. There are ten components of physical condition that are closely related to sports activities, ranging from endurance to flexibility. If the physical condition is good, there will be an increase in the circulatory system's ability and the performance of the heart and lungs (cardiovascular), strength, flexibility, speed, and so on. This is in line with what is mentioned by Bompaa in [4], Physical conditions are needed in every sport to support achievement and balance individual skills. This means, the better the level of a person's physical condition, the greater the possibility to achieve optimal performance in each competition. In finswimming, there are several physical conditions needed by athletes, [5] found that main muscle groups related to SF sprint swimming performance among men were knee extensors, hip and trunk flexors. [6] Lung capacity factors and maximal oxygen volume have an effect on apnea in high category dives.

Pasuruan is a district with many diving athletes who excel and have high potential at the national level. It was proven that at the 2019 Porprov event, Pasuruan Regency collected 11 gold medals, 1 silver medal, and three bronze medals from a total of 19 athletes included in the biennial event. As a result, Pasuruan Regency came out as the overall champion in the diving sport at the Provincial Sports Week (Porprov) that year. Based on previous research [7], the dominant factor in finswimming is aerobic capacity, with aerobic capacity being in the medium category. This study look at other dominant factors affecting the physical condition of finswimming

athletes.

Based on the background, the focus of this study is to determine and analyze the level of physical condition possessed by finswimming athletes in Pasuruan. Therefore, the data of the level of the physical condition of finswimming athletes can be used for the comparison the following research about the level of the physical condition, especially for the finswimming athletes.

2. METHODS

This study used a quantitative descriptive approach with a total sample of 19 athletes consisting of 7 males and 12 females. The characteristics of the sample are samples that have participated in the 2019 East Java PORPROV. Before carrying out this test, the sample has been given information about how to do the test and its impact after the test. All samples were in good health and had no history of injury at all. The tests were carried out collectively at GOR KONI, Pasuruan Regency. Data collection techniques used are tests and measurements. The research test and measurement use the dominant physical condition test in finswimming. Test and measurement consist of: (a) abdominal muscle strength (30 seconds sit-ups), (b) power of leg (standing board jump), (c) flexibility (sit and reach), (d) Vo2Max endurance (Multi-Stage Fitness Test). The test and measurement were adopted from [8], each point from the several tests, added up and then made into five categories of physical condition. Each test is given each criterion ranging from very poor to very good according to the norms on each test instrument. Each criterion is given a value which will be added up, in presenting this research data using five categories of norms [9], the norms used and the range of values can be seen in table 1.

Table 1. Norms of physical conditions

Norms	Range Value
Very Poor	4 – 7,5
Poor	7,6 – 11,1
Moderate	11,2 – 14,7
Good	14,8 – 18,3
Very Good	18,4 – 22

The analysis used is descriptive statistical analysis and uses a percentage of the results of the physical condition of finswimming athletes in the Pasuruan district based on the formula:

$$P = \frac{f}{N} \times 100\%$$

P: the percentage sought; f: frequency; N: number of respondents

3. RESULTS

The data obtained from the research were processed and analyzed statistically. Furthermore, the analysis is carried out by compiling the norm of each item of the physical condition test. The results of data analysis were adjusted to the age and sex of the subject so that the results were following the norms of each test item—the results of the classification and assessment norms for the physical condition of finswimming athletes in Pasuruan district.

Table 2. Results of classifiers and norms of physical condition assessment of Pasuruan finswimming athletes

Category	Range value	Total	%
Very Poor	4 – 7,5	0	0%
Poor	7,6 – 11,1	1	5,3%
Moderate	11,2 – 14,7	9	47,4%
Good	14,8 – 18,3	8	42,1%
Very Good	18,4 – 22	1	5,3%

Based on table 2, it can be seen that the physical condition of the Finswimming Athletes in Pasuruan Regency is dominated by the moderate category with 9 (nine) athletes (47.4%), then the good category with 8 (eight) athletes (42.1%), then the poor category. with 1 (one) athlete (5.3%), while athletes with very good condition amounted to 1 (one) athlete (5.3%). When viewed using a histogram, the results of the study are as follows:

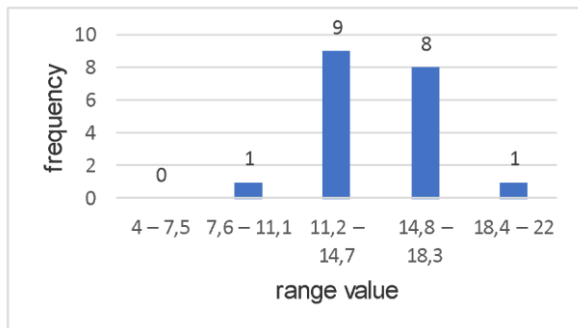


Figure 1. Histogram of the Physical Condition of Finswimming Athletes in Pasuruan Regency

4. DISCUSSIONS

This study aims to examine the physical condition of athletes in the Finswimming branch of Pasuruan Regency. The results of this study indicate that the physical condition of the finswimming athlete as a whole shows 5.3% is in the very good category, 42.1% is in a good category, 47.4% is in the moderate category, 5.3% are included in the poor category, and 0% are included in the very poor category. From these data, it can be concluded that the physical condition of athletes in the Pasuruan district finswimming is in the moderate category with a percentage of 47.4%.

The results showed that the physical condition of athletes in the Pasuruan district finswimming was in moderate condition. According to [10], There are so many factors that influence physical condition, including 1) exercise factor, 2) training load principle factor, 3) rest factor, 4) healthy living habits factor, 5) environmental factor and, 6) food factor.

The physical condition plays a crucial role for the athlete. The better the athlete's physical condition, the better the achievements he will get. According to [2], In sports, achievement is to get the highest achievement. To get the

highest achievement, good physical condition is needed. The article [11] said that "Good physical fitness is the basis for sports. An athlete who has good physical fitness not only can increase the efficiency of learning sports skills, but also can reduce the incidence of injuries and accidents caused by the movement." The good physical condition of athletes gives athletes efficiency when understanding sports techniques that can later be applied when competing, and it is proven that the 2019 Porprov finswimming performance contingent of finswimming in Pasuruan district, represented by 18 athletes, became the overall champion in finswimming by donating 11 gold, one silver,, and three bronze.

The physical condition of athletes can be improved again through structured training. [7] The physical condition possessed can be improved by developing all components of physical condition in a balanced manner by not forgetting which component is more supportive. An athlete can develop basic technical skills to a more advanced level if adequate physical condition [12]. According to [13] in his research, physical condition is an integral part of achieving achievement. A good level of physical condition will lead athletes to develop basic techniques towards more advanced techniques. According to Sajoto in [10], physical condition training can be divided into two types of exercise programs: programs to improve physical condition and exercise programs to maintain physical condition.

In the sport of finswimming, there are several components of the physical condition needed by athletes, including abdominal muscle strength, leg power, flexibility, Vo2Max endurance, in line with research. According to [14], there is a significant relationship between leg length, leg muscle strength, and maximum oxygen volume with the achievement of finswimming athletes in Central Java Province. In this study, leg muscle strength and maximum oxygen volume have a relationship with finswimming athlete performance, this is in line with the results of athletes' achievements in sports. Pasuruan district finswimming in 2019 Porprov, the results of this achievement are supported by the physical condition of Pasuruan district finswimming athletes in the moderate category. [15] Flexibility, explosive muscular strength, and isotonic and isometric muscular strength of fin swimmers, evaluated as factors

related to athletic performance, all showed improvement after 12 weeks of combined training.

This study explains that physical condition is a very important part of achieving a sports achievement. A good athlete's physical condition can lead athletes to develop basic techniques to a more advanced level.

5. CONCLUSION

From the research, it can be concluded that the physical condition of the Pasuruan finswimming athlete is included in the moderate category. Although, this research is expected to be information for coaches to improve the performance of finswimming athletes, physical condition can be improved again through the addition of structured training.

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