

Analysis of Fitness Levels of Swimming Athletes During the Covid-19 Pandemic

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Abstract. This study aims to analyze the fitness level of swimming athletes in Semarang age group 10-12 years, especially during the covid-19 pandemic that is or is still ongoing. Restrictions on community activities, both micro-scale and macro, cause swimming training to experience significant disruption. The method used is to use the fitness level test method according to age or age. Tests used for this age include 40-meter sprints, sit-ups, pull-ups, vertical jumps, and 600-meter running tests. The results of the study conducted on September 3-6, 2021 are the following results for the TKJI test of male swimming athletes, the percentage of male swimming athletes who get moderate results is 3.03 % (1 athlete), and 48.48 % (16 athletes), based on the average fitness value of male swimming athletes is 13.23%, can be expressed in the less category. And for female athletes, moderate results were obtained by 42.42 % (2 athletes), and less categories were 6.06% (14 athletes), with an average of 16 female athletes as follows, 13.56% with less categories, the conclusion is that the level of physical fitness of Semarang city swimming athletes aged 10-12 years in Semarang city was declared less fit, due to the effects of government policy and less active athletes during the covid-19 pandemic.

Keywords: Swimming Athletes; Covid-19 Pandemic; Indonesian Physical Fitness Test (TKJI)

1 Introduction

The covid-19 pandemic has been going on for a year, the effects of which have been tremendous to all lines of life [7]. No exception to the world of sports, especially in terms of matches / competitions, is very limited even in Indonesia at the beginning of the covid-19 pandemic banned until now [8], athletes and performances that have been built for a very long time are very disturbed by this, especially swimming athletes [16]. Swimming athletes are required to practice regularly, even systematically and are not allowed to rest completely for two twenty-four hours, because it will be directly related to the fitness of the athlete himself [5].

Fitness is the main element that must exist in every athlete, especially swimming athletes [2], although the dominant we see in every race is speed, of course as academics we know that the element of speed without being supported by the element of endurance, especially fitness will be meaningless [13], fitness becomes a determinant of both the number of short, medium and

long distances in each race number in swimming. The efforts of all lines starting from the coach in creating fitness are very important, especially for junior athletes because this is actually the Muara candidate who will later become an important factor in achieving achievements when the athlete has reached senior [25].

The level of physical fitness of swimming athletes during the pandemic is very worrying, we know that at the beginning of the covid 19 pandemic all activities were limited even in Semarang city, restrictions on community activities were applied or we often call them PPKM. In March, the existing swimming club in Semarang city has started to retrain, so the researchers think that it is important to examine the level of fitness of athletes in Semarang city which will be used as important information, especially for Semarang city in general and their club shelter, in particular as an effort to restore swimming achievements, especially from the side of junior athletes.

The interesting point of this study is that with the analysis of fitness levels for swimming athletes, researchers can provide an overview of the fitness levels of swimming athletes, especially aged 10-12 years who during the covid-19 pandemic rest and are not intensive in training, this starting point that makes coaches will make decisions, especially in the evaluation of macro programs in the swimming coaching cycle.

Terms that often appear in the physical fitness test we often find in the Indonesian physical fitness test [7], the term that often appears in the study is kesamaptaan, fitness and Physical fitness [8] which all have the same understanding. Physical fitness is a person's ability to perform a physical activity, in certain tests that can be used to assess indicators of a person's ability or performance [9].

Toho cholik mutohir and ali infallible [10] concluded that a person's ability to do a certain effort in some time without having significant fatigue. Fitness is also defined as the body's effort to respond to physical stress and immediately neutralize it again without experiencing significant difficulties [11].

From the opinion of the experts above it can be concluded that physical fitness is an important element that must be owned by a person, especially athletes. The athlete's daily diet is a physical activity and is very relevant if the physical condition is in a fit, healthy, strong and ready to start movement activities in the sense of training with portions tailored to the needs for the sake of improving performance.

Toho cholik mutohir and ali maksum [10] divided several components of physical fitness, namely:

1. Kelentukan
2. Muscle speed in contracting
3. Cardiovascular endurance
4. Skeletal muscle strength
5. Muscle endurance

Looking at the statements of experts / experts above can be concluded that the components of physical fitness that can be studied later can be divided into four parts, including:

1. Endurance
2. Power
3. Speed, and
4. Muscle strength

A way to analyze or measure physical fitness can be done with several models, including [12] using the Indonesian physical fitness test (TKJI), which is a reference for trainers, penjas teachers and other sports people used as a reliable measurement benchmark, and valid because it has gone through a long procedure in pembuatannya.

Another basis is to use this test, adjusting to the condition of children in Indonesia so that it fits and is suitable for use as an analysis tool or measuring instrument in order to see the physical potential possessed by Indonesian athletes [13], TKJI itself is divided into several age levels, for the age to be used as a benchmark is 10-12 years

a. TKJI age 10-12 years consists of:

- 1) run 40 meters
- 2) hanging body lift, 60 seconds
- 3) bed sitting, 30 seconds
- 4) jump upright, and
- 5) 600 meters running

Starting from this, researchers are interested in conducting a study with the title: analysis of the fitness level of swimming athletes during the Covid-19 pandemic.

1.1 Objectives

The purpose of this study is to determine the level of physical fitness of athletes swimming Semarang, especially when restrictions on community activities are implemented, so that it can be used for referral trainers to make a better exercise program after exercise activities can be implemented.

2 Methods

Based on the discussion of the chapter The purpose of this study is to determine by using the analysis of the level of fitness of swimming athletes Semarang, Central Java. The methods used to conduct research are as follows the research approach used, how to display sample samples and populations, instruments used in research, how to take data in research, how to analyze research data, the schedule or time of research is carried out, and the last is a bibliography [15].

Variety of research that will be used is a direct survey method with a variety of approaches chosen by the researcher is descriptive. Survey is the approach chosen by the researcher who aims to find information in the form of data to be obtained complete and accurate [16]. The researchers aimed to obtain data on the level of physical fitness of Semarang city swimming athletes during the covid-19 pandemic.

Population is the number of swimming athletes to be studied in the age group of 10-12 years [17]. So that the populasi that will be used is a number of swimming athletes in the city of Semarang in the age of 10-12 years or entered in the age group 4, in accordance with the age group division in PB PRSI [18].

Sampling or often referred to as a sample is a portion of some population that will be used as the object of research/ research [19], if the studied less than a hundred people then it can be used all or in the sense is the total sampling, but if there are more or more than serratus people then it can be taken 10-15 percent or 20-25 percent or more [20].

Measurement of the level of physical fitness of Semarang city swimming athletes aged 10-12 years was measured using the Indonesian/TKJI physical freshness test items, namely 40 meters fast running, bed-sitting, pull-ups, jumping upright and running as far as 600 meters [21].

To obtain relevant and accurate information, it is necessary to measure information that can be accounted for, namely measuring instruments or substantial research instruments, because good research instruments must meet two requirements, namely substantial and reliable [22]. In this study, the physical fitness meter conducted physical fitness test on the object of study using test observation sheet [23].

Tests and measurements conducted and standardized in the symposium in 1984 TKJI test has been agreed with the test items for the age of 10-12 years are as follows, namely:

1. Sprint 40 meters
2. Pull up
3. Sit up
4. Vertical jump
5. Run 600 meters

This test is a valid and reliable instrument that can be used as a physical freshness test guideline in order to get the results of the level of physical fitness for the age of 10-12 years for the son and daughter [24], so that the results will be as a reference stakeholder/Semarang city government for input material about the state of the fitness level of swimming athletes aged 10-12 years both the son and daughter of Semarang City.

3 Data Collection

The data obtained as follows, the physical fitness data of Semarang city swimming athletes aged 10-12 years are in the category of less once with a percentage of 0% (no athletes), less percentage category of 90.09% (30 athletes), moderate category percentage of 9.09% (3 athletes), good category percentage of 0% (0 athletes), and excellent category with a percentage of 0% (0 athletes). Meanwhile, based on the average value of 13.39, the level of physical fitness of male and female athletes is included in the category of less.

The COVID-19 pandemic has an effect on all lines, especially sports nurseries, including Semarang city swimming athletes, starting from the change of policy from not being allowed to do activities, with restrictions on large-scale community activities, until the implementation of restrictions on community activities has an impact on many facilities and infrastructure closures and the effect is that Semarang city swimming athletes, swimming athletes are athletes who are special seen from the hours of training because it is not allowed to exercise holidays within 2x24 hours, if it happens of course the effect on the performance of physical fitness athletes, and it is proven by the Indonesian physical fitness test for the age of 10-12 years obtained less results, it is obtained because after the opening of the new swimming pool

2 weeks opened, athletes are given tests and the results can be used as material for future evaluation, of course to City athletes and related parties to improve the performance of swimming Semarang and Central Java.

4 Result and Discussion

This study was conducted in the city of Semarang, precisely in the sports arena Manunggal Jati, East Semarang. Conducted on September 1, 2021 until September 4, 2021. The research subjects were swimming athletes aged 10-12 years, Semarang men and women.

5.1 Numerical Results

The results of the 2021 Indonesian physical fitness test research, Semarang city swimming athletes aged 10-12 years consisting of Test 1). Run 40 meters, 2). Body lift hanging Test, 3). Sitting bed test, 4). Test skip upright, and 5). The 600-meter running test is as follows:

Table 1. distribution of physical fitness athletes swimming Semarang age 10-12 years

No	Number of Values	Classification	Frequency	%
1	22-25	Very Nice	0	0 %
2	18-21	Good	0	0 %
3	14-17	Medium	3	9.09 %
4	10-13	Less	30	90.9%
5	5-9	Less Once	0	0%
Results			33	100%

5.2. Graphical Results

Here is a presentation of physical fitness research results Semarang swimming athletes aged 10-12 year, the graph data as follows:

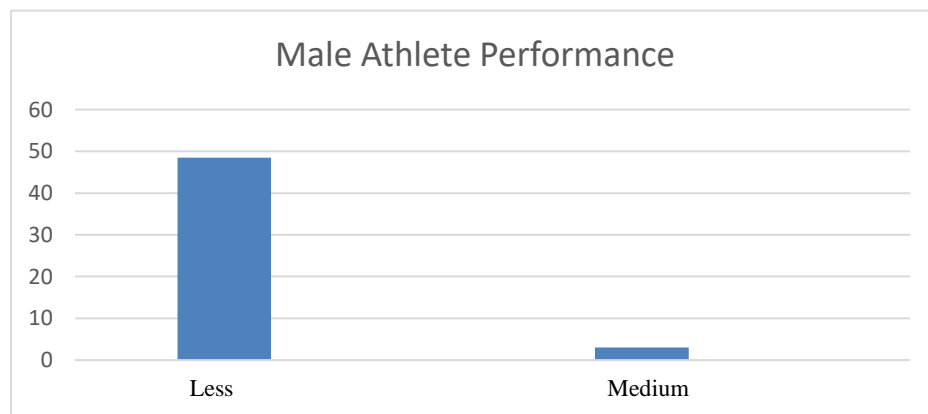


Fig. 1. Male swimming athletes aged 10-12 years

Judging from the graphic data above, the following results are obtained for the TKJI test of male swimming athletes, the percentage of male swimming athletes who get moderate results as much as 3.03 % (1 athlete), and as much as 48.48 % (16 athletes), based on the average fitness value of male swimming athletes is equal to 13.23 %, can be expressed in the category of less.

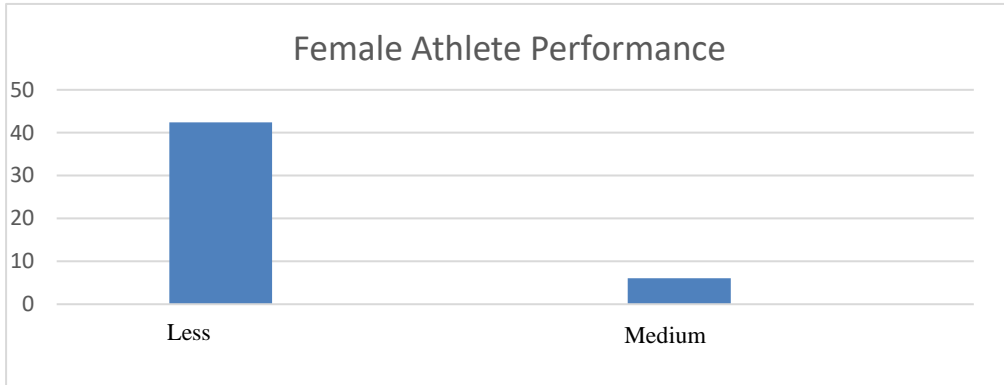


Fig. 2. Female swimming athletes aged 10-12 years

5.3. Proposed Improvements

The graph above is the achievement of the TKJI test of female swimming athletes aged 10-12 years Semarang city, obtained moderate results as much as 42.42 % (2 athletes), and less category as much as 6.06 % (14 athletes), with an average of 16 female athletes as follows, 13.56% with less category.

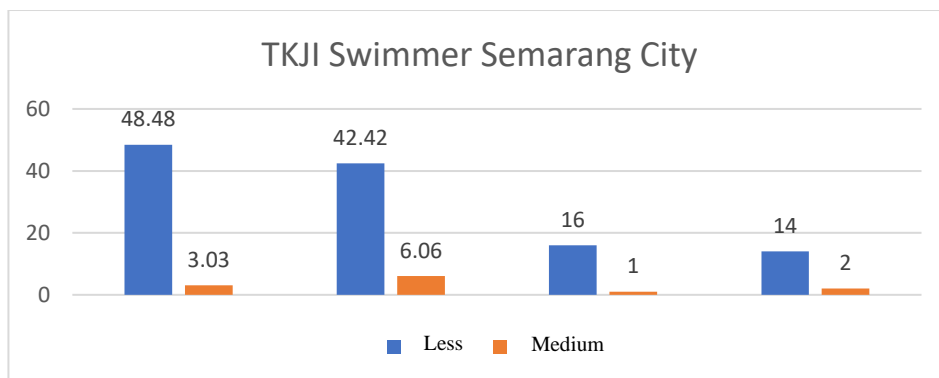


Fig. 3. Semarang City Swimming Athletes Aged 10-12 Years

5.4. Validation

Based on the table and graph above shows that the physical fitness data of Semarang city swimming athletes aged 10-12 years are in the category of less once with a percentage of 0%

(no athletes), less percentage category of 90.09% (30 athletes), medium category percentage of 9.09% (3 athletes), good category percentage of 0% (0 athletes), and excellent category with a percentage of 0% (0 athletes). Meanwhile, based on the average value of 13.39, the level of physical fitness of male and female athletes is included in the category of less.

6 Conclusion

The effects of the covid-19 pandemic are presented very real, especially to the object of research, namely the Indonesian physical fitness test for athletes aged 10-12 years, proven to get 90% less fit results, so the training pattern and training strategy will start from scratch, this is the embodiment of the consequences of the rules made by the government, which is a priority, because currently other countries also with its policies make everything a new normal, even the Olympic event has just been completed, and after this will be welcomed by a national grand event such as PON, so we need to wait for this policy / rule to improve for sports people so that achievements continue to increase, especially for the image of the Indonesian nation

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