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## ANALYSIS OF THE PHYSICAL CONDITION OF FOOTBALL PLAYERS OF THE YOUTH ASSOCIATION OF ARTS AND SPORTS

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### Abstract

This research was born out of the curiosity of a researcher and is based on observations regarding the analysis of physical conditions. Football players of the South Coast Youth Arts and Sports Union. The purpose of this study is to (1) find out the strength of the leg muscle explosion of the South Pesisir Regency Arts and Sports Youth players, (2) find out the strength of the South Pesisir Regency Arts and Sports Youth players, (2) find out the strength of the South Pesisir Regency Arts and Sports Youth players. Association (3) knows the agility of the players of the South Pesisir Regency Arts and Sports Youth Association. (4) Knowledge of aerobic endurance of players of the South Pesisir Regency Arts and Sports Youth Association. The type of research used in this study is descriptive and aims to describe the situation or symptoms of the subject. The type of data in this study is primary data and supported by secondary data. Primary data is direct observation data from the players of the South Pesisir Regency Arts and Sports Youth Association. Meanwhile, the data was obtained from documents requested directly from the trainer of the South Pesisir Regency Arts and Sports Youth Association. Based on the analysis and discussion of data, as well as data processing carried out regarding the level of physical fitness of the football players of the South Pesisir Regency Youth and Sports Association, the following conclusions can be drawn: (1) the level of agility of the football players of the South Pesisir Regency Youth Sports Association is in the medium category, (2) the explosive level of the leg muscles of the South Pesisir Regency Youth Association is in the medium category. medium category, (3) The level of leg muscle resistance of the Youth Arts and Sports Footballers of South Pesisir Regency is included in the medium category, (4) The level of aerobic endurance of the Youth Arts and Sports Association of South Pesisir Regency is included in the average category.

## 1. Introduction

Indonesia is the country with the fourth largest population in the world and has many human resource opportunities. The nation itself can select and nurture Indonesian citizens and attract outstanding talents for the progress of the nation at home and abroad. Many factors affect the improvement of the quality of Indonesia's human resources, and there are many things that can be taken to influence. This will help increase the pride and honor of the nation in the future, including in the field of sports. To make sports a means of national development, the government seeks to improve the quality of human resources. Sports are important in improving the quality of human resources. Sporting events are a place where the potential and abilities of everyone who does it can be developed, and what is done can benefit those who do it (Hadiana O. & Sartono S. 2017).

One of the sports that is growing rapidly and is becoming more popular around the world, especially in Indonesia, is football. Football is a team game whose goal is to score as many goals as possible against the opponent's goal and keep the opponent's goal from missing. The winner is the team that scores the most goals. Football is a game that requires a lot of energy, intelligence on the field generates enthusiasm and also brings joy to the unity of the team. In football, there are many factors that affect success. The factors that affect sports performance can be divided into two, namely endogenous (internal) and extrinsic (external) factors. Internal factors that come from within themselves, factors that come from the athlete with all the potential they have (Syarifuddin, 2013). The success of an athlete in competition is mainly determined by the physical ability, technique, tactics, and ability or performance of the athlete to exceed his potential. External factors include coaches, managers, climate, weather, nutrition, family.

In addition to endurance, players also need explosive leg strength. This strength is the ability of the leg muscles to make movements quickly and strongly and produce maximum power. The explosiveness of the leg muscles is evident when playing. Players must be able to jump as high as possible to receive passes from their teammates. Back passes can be corners, free kicks, or assists from teammates. The incredible explosive power of the leg muscles allows players to compete with opponents for the ball. In addition, he has excellent explosive leg power, which allows him to kick hard and quickly, thus increasing his chances of scoring goals.

## 2. Materials and Methods

This type of research is descriptive and aims to describe the situation or symptoms on the subject. This is in line with Aricunto (2010:110): "Descriptive research is research that does not aim to test a certain hypothesis, but only describes what is true about a certain variable, symptom or circumstance." Thus, this study only identifies and describes the symptoms. The purpose of this study is to study the physical condition of football players of the South Coast Regency Arts and Sports Youth Association.

## 3. Results

### a. Agility Data

Based on the results of the test and agility measurement using the dodge running test of football players of the South Pesisir Regency Youth Sports and Arts Association, out of 18 selected athletes, the best result was 22.43 seconds, the lowest result was 29.23 seconds, and the average result was 29.23 seconds. The estimated time is 22.43 seconds, the meme is 25.13 seconds, and the standard deviation is 1.88. Based on the results of the test, a frequency distribution table can be made as follows:

Table 1. Data Frequency Distribution Based on Flexibility

No	Category	Time Interval	Frequency	Percent (%)
1	Very Good	< 23.07	2	11
2	Good	23.08 – 25.00	7	39



3	Sufficient	25.01 – 26.03	3	17
4	Not Good	26.04 – 27.06	4	22
5	Very Insufficient	> 27.07	2	11
Quantity			18	100

Based on the frequency distribution table above, of the 18 players of the South Coast Regency Sports and Arts Youth Association, 2 players (11%) have agility in the very good category, 7 players (39%) have an agility level, good category, 3 players (17%) have an agility level in the fair category, 4 players (22%) have a high level of agility in the low category and 2 players (11%) have an agility level in the very low category.

b. Limb Muscle Explosiveness Data

Based on the results of testing and measuring the explosive strength of leg muscles using the standing long jump test on football players of the South Pesisir Regency Youth Artistic Sports Association, from 18 selected athletes, the highest score was obtained 2 67 cm, the lowest score. was 186 cm, the average score was 219 cm on average, the standard deviation was 17.52. Based on the results of the test, the following can be made:

Table 2. Distribution of Leg Muscle Explosive Data Frequency

No.	Categori	Interval	Frequensi	Persen (%)
1	Very Good	> 224cm	5	28
2	Good	188 – 224cm	12	67
3	Sufficient	150 – 187cm	1	6
4	Not Good	113 – 149 cm	0	0
5	Very Insufficient	< 113 cm	0	0
Quantity			18	100

Based on the frequency distribution table above, of the 18 players of the South Coast Regency Youth Arts and Sports Association, 5 players (28%) have explosive strength in the leg muscles with a very good category, 12 players (67%) have explosive strength. level. Including the good category leg muscles, 1 player (6%) has a certain level of explosive leg muscle strength in the moderate category and none in the minor category.

c. Strength Durability Data

Based on the results of the test and measurement on power power using a 30-second jump test, the football players of the South Pesisir Regency Youth and Sports Association were tested 32 times, the lowest score was 13 times, the average score was 20 times, and the standard deviation (SD) was 5.59. Here is the frequency distribution table:

Table 3. Frequency Distribution of Strength Endurance

No.	Categori	Interval	Frequensi	Persen (%)
1	Very Good	$X > 29$	1	6
2	Good	$23 > X \leq 29$	3	17
3	Sufficient	$18 > X \leq 23$	5	28
4	Not Good	$12 > X \leq 18$	8	44
5	Very Insufficient	$X \leq 12$	0	0
Quantity			18	100

Based on the frequency distribution table above, of the 18 players of the South Pesisir Regency Youth Arts and Sports Association, 1 player (6%) has strength resistance in the very good category, 3 players (17%) have a level of strength resistance. In the Good category, 5 players (28%) have a level of strength resistance in the fair category,

8 players (44%) have a level of strength resistance in the small category and none in the very small category.

d. Aerobic Endurance Data

Based on the results of tests and measurements of aerobic endurance (VO2Max) using a beep test on football players of the South Pesisir Regency Youth Arts and Sports Association, the highest score was 37.8 and the lowest score was 26.2 with an average of 32.9 and the standard deviation (standard deviation) of 3.5. Based on the results of the test, a frequency distribution table can be made as follows:

Table 4. Frequency distribution of aerobic endurance data (VO2Max)

No.	Categori	Interval	Frequensi	Persen (%)
1	Very Good	>53	0	0
2	Good	43–52	0	0
3	Sufficient	34–42	9	50
4	Not Good	25–33	9	50
5	Very Insufficient	<24	0	0
Quantity			18	100

Based on the frequency distribution table above, of the 18 players of the Pesisir Selatan Regency Youth Arts and Sports Association, 9 players (50%) have a sufficient level of aerobic endurance (VO2Max) in the category of mediocre, 9 players (50%) have a sufficient level of aerobic endurance (VO2Max).

#### 4. Discussion

Agility is a person's ability to change position and direction as quickly as possible depending on the situation and the desired speed at high speed (Zefiter & Irawan, 2018:307). According to Arifuddin (2017:127), "Agility is the ability to change the direction and position of the body or its parts quickly and accurately." From this opinion, we can conclude that agility is a person's ability to change direction while moving quickly and precisely without losing balance. Based on the results of the research, the skills of athletes of the Pesisir Regency Arts and Sports Youth Association are still far from expectations. This means that the coaching staff has homework to improve the agility of the Coastal District Youth and Sports Association players. Flexibility exercises include footwork, hexa, back-and-forth running, and zigzag running. Training should be age-appropriate for young players, and training should be disciplined and consistent to achieve what is expected of player skills.

Based on the results of testing and measuring the explosive strength of the leg muscles using the standing long jump test on football players of the South Pesisir Regency Youth Artistic Sports Association, from 18 selected athletes, the highest score was obtained at 267 cm, the lowest score. is 186 cm, average score Average height is 219 cm, standard deviation is 17.52. The frequency distribution in 18 players of the South Pesisir Regency Arts and Sports Youth Association was studied, 5 players (28%) had leg muscle explosiveness in the very good category, 12 players (67%) had explosive leg muscle power in the good category, 1 player (6%) had a certain explosive level of leg muscle strength in the moderate category and not in the poor and very poor category. Based on the results of the analysis, it is known that the explosive power level of the leg muscles in football players of the South Pesisir Regency Arts and Sports Youth Association averages 63 kg-m/s. It can be concluded that the level of Explosive Strength of Leg Muscles of the South Pesisir Regency Arts and Sports Association football players is in the good category. "Explosive force is the strength and speed of muscle contraction that explodes dynamically in a short period of time" (Herman & Doni, 2019:296). According to Tifaly and Padley 92020:567), "Explosive power is the athlete's ability to overcome obstacles at high contraction speeds.

Fadillah and Yulifri (2019) explained the advantages of explosive power or power, namely: 1) being able to

achieve maximum achievement, 2) being able to develop competitive techniques with fast steps and unexpected movements, and 3) being able to strengthen yourself. Athletes' competitive spirit, 4) Anaerobic energy reserves are huge. According to this view, good explosiveness in the leg muscles will make it easier for players to master the technique of competing with fast steps and sharp movements, when playing football on the field, especially against football players whose mental strength will be stronger.

Based on the explanation above, it is necessary to increase the explosiveness of the leg muscles of the South Pessil Regency Youth Football Association. Continuous training is carried out, especially for players whose leg muscles are not strong. Exercises that increase the explosiveness of the leg muscles include exercises such as squat jumping, double-legged frog jumping, double-legged jumping (crossed), exercises that combine strength and speed, and jumping rope. The long jump test of standing and without start conducted by the athletes in this study was used to practice jumping rope, climbing stairs, and developing the explosive strength of the legs.

The results of the study were the results of tests and measurements of endurance strength using a 30-second jump test involving football players of the South Pesisir Regency Youth Arts and Sports Association which was carried out 32 times, the lowest score was 13 times, the average score was 20 times, and the standard deviation (standard deviation) was 5.59. The frequency distribution of the 18 players studied by the South Pesisir Regency Youth Arts and Sports Association of South Pesisir Regency: 1 player (6%) had a very good level of strength resistance, 3 players (17%) had a good level of strength resistance, 5 players (28%) had a level of strength resistance in the moderate category, 8 players (44%) had a level of strength resistance in the poor category and none were in the very poor category. It can be concluded that the stamina level of players of the South Pesisir Regency Sports and Arts Youth Association is in the medium category. "Endurance strength is the ability of muscles to be able to cope with or maintain fatigue caused by force majeure over a relatively long period of time." (Hardiancia, 2016). According to Nursalam and Aziz (2020:236), "Leg muscle strength is the ability of a muscle group to perform a movement or overcome a load." muscles to perform motor activities to overcome fatigue due to exercise in a short period of time.

Based on the results of the study, it is known that the results of the strength of the leg muscle endurance of football players of the South Coast Regency Youth Association are still far from what is expected, this is because the condition of leg muscle strength is very important for endurance in the game of football, therefore it is also recommended to train Youth Sports and Sports Football in the South Coast has carried out several exercises to be able to increase muscle endurance foot. Exercises that can be used are going up and down stairs, jumping, squatting, and so on.

The results of the test and measurement of aerobic endurance (VO2Max) using audio test on football players of the South Pesisir Regency Youth Arts and Sports Association were as follows: the highest score was 37.8, the lowest score was 26.2, and the average score was 32.9 The standard deviation was 3.5. Frequency distribution of 18 players of the South Pesisir Regency Youth Sports Arts Association. Nine players (50%) had a moderate level of aerobic endurance (VO2Max) and nine players (50%) had an aerobic endurance level (VO2Max). The categories are "Bad" and "Bad", "None", as well as the categories "Very Good", "Good", "Very Bad". Based on the above opinion, aerobic endurance can be interpreted as general endurance, which is the body's ability to work at high intensity for a relatively long period of time. Therefore, endurance in football refers to the ability of players to perform activities during the game. Therefore, the soccer players must have a physical condition that allows them to continue practicing and playing for a long period of time without feeling excessive fatigue after training or matches. Without good aerobic endurance, a soccer player cannot perform the physical tasks assigned to him during a match.

Football players at the South Pesisir Youth Arts and Sports Association mostly have low aerobic endurance so it is necessary to increase aerobic endurance. Ways to improve aerobic endurance include sports such as long-distance cycling and swimming, uphill and downhill running, and long-distance running with a low and stable

treadmill (running speed). This exercise should be done regularly to improve the function of the heart and circulatory system (cardiovascular system) to the lungs. Please note, aerobic gymnastics is an activity that relies on the presence of oxygen that supports the process of burning energy sources so that the function of organs in the body can function optimally.

## **5. Conclusion**

Based on the analysis and discussion of data and data processing carried out regarding the physical condition of the football players of the South Pessil Regency Youth and Sports Association, the following conclusions can be drawn. The agility of the South Coast Regency Youth Sports Association football players is included in the medium category. (2) The explosive level of the leg muscles of the South Pessil Youth Arts and Sports Association is in the medium category. (3) The level of leg muscle endurance of the South Pessil Regency Sports and Football Youth Association is in the medium category. (4) The aerobic endurance level of football players of the South Pessil Youth Arts and Sports Association is in the medium category.

## **Declaration of Competing Interest**

There is no conflict of interest in the implementation of this research

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