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The Physical Fitness of Regional Student Sports Week Basketball Male Athletes in Kepahiang Regency

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Abstract

The physical fitness of regional student sports week basketball male athletes in Kepahiang regency is the main goal to be achieved in this study. The research method used is descriptive quantitative with a survey approach. The population in this study were all male basketball athletes, totaling 15 athletes. Total sampling was used in this study to determine the number of samples involved in this study. So 15 athletes were involved in the study as research samples. Data collection techniques using the Indonesian physical fitness test. While the instruments used include a 60-meter running test, pull-ups, sit-ups, vertical jumps, and a 1.2 km run. The components of physical fitness that were taken in this study consisted of components of speed, hand muscle strength, abdominal muscle endurance, leg muscle power, and aerobic endurance. Data analysis used descriptive percentage analysis by looking at the frequency table and categories of physical fitness for male athletes aged 17-19 years. The results of the study describe that the speed aspect is in the medium category (53%), the arm muscle strength aspect is in a good category (80%), and the abdominal muscle strength aspect is in a good category (47%), the leg muscle power aspect is in a good category (47%), the aspect of endurance is in the moderate category of 60%. So it can be concluded that the physical fitness of regional student sports week basketball male athletes in Kepahiang regency is a medium category.

Keywords: *physical fitness, athletes, basketball.*

INTRODUCTION

Regional Student Sports Week or commonly referred to as POPDA is one of the government programs carried out by local governments every 2 years aiming to find new seeds to continue regeneration, to improve the skills possessed by students so that they get the expected sports achievements. One of the prestigious sports that are competed at POPDA is basketball. Basketball is a team game that is carried out with a high intensity of play so that athletes are required to have a good or very good level of physical fitness (Setia & Winarno, 2021).

By having good physical fitness, athletes will be able to move actively and dynamically at a high intensity (Puente et al., 2017). Physical fitness is the athlete's ability to be able to perform various motion activities without experiencing fatigue that can harm him (Mancha-Triguero et al., 2019). In general, the components of physical fitness include speed, strength, cardiovascular muscle endurance, agility, power, and flexibility (Zhu et al., 2017). To get a good level of physical fitness, continuous physical exercise with the right intensity, proper nutritional intake, and quality rest is needed (Pilis et al., 2019).

The results of previous studies stated that individuals who do physical activity regularly tend to have a better level of physical fitness when compared to individuals who do not do physical activity (Henriques-Neto et al., 2020). Various research results state that physical fitness has an important role to achieve success in sports and academics (de Bruijn et al., 2018; Lesinski et al., 2020). Research on the level of physical fitness of POPDA athletes has been carried out by previous researchers including research from (Nizam, 2020) which examines athlete endurance.

However, this research only focuses on one component of physical fitness so the other components have not been discussed in this study. Similar research was also conducted by (Rasyid, Iyakrus, & Syamsuramel, 2018) which states that the better the level of physical fitness, the easier it will be for athletes to master the basic techniques of basketball. However, this study only discussed the

relationship between physical fitness and basketball shooting ability. Although research on physical fitness in basketball athletes has been carried out, research on physical fitness in female basketball athletes at POPDA Kepahiang Regency has not been widely discussed.

Based on observations made in the field, it was found that athletes get tired easily in following the training material provided by the coach, accuracy of passing that is not right on target, athletes are still easy to fall when experiencing body contact with opponents, lack of agility possessed by athletes which are described from difficult to penetrate the opponent's defense. It is feared that this problem will affect the appearance of athletes which has an impact on decreasing achievement. Therefore, it is important to know the level of physical fitness of POPDA basketball athletes in Kepahiang Regency. The results of this study are expected to be able to provide recommendations to coaches to develop appropriate training programs to maintain and improve the physical fitness of POPDA athletes in Kepahiang Regency.

METHOD

The research method used is descriptive quantitative, namely research that aims to describe a real phenomenon without giving treatment to the subject or research sample (Nopiyanto & Pujiyanto, 2021). The process of collecting research data was carried out at the State Senior High School 1 Kepahiang. The population involved in this study were all male basketball POPDA athletes in Kepahiang Regency, which consisted of 15 athletes. By using a total sampling technique, the sample of this study amounted to 15 male basketball athletes. The data collection technique used the Indonesian Physical Fitness Test for boys aged 16-19 years (Nurhasan, 2013).

While the instruments used include a 60-meter running test, pull-ups, sit-ups, vertical jumps, and a 1.2 km run. The components of physical fitness that were taken in this study consisted of components of speed, hand muscle strength, abdominal muscle endurance, leg muscle power, and aerobic endurance. Data analysis used descriptive percentage analysis by looking at the frequency table and categories of physical fitness for boys aged 17-19 years.

RESULTS AND DISCUSSION

The Result of Research

The results of research regarding the level of physical fitness in POPDA male athletes in the basketball sport of Kepahiang Regency are shown in the table below.

Table 1. Physical fitness level on the speed aspect

No	Score	Category	Frequency	Percentage
1.	< 7,2" second	Very Good	1	7%
2.	7,3" - 8,3" second	Good	4	27%
3.	8,4" - 9,6" second	Moderate	8	53%
4.	9,7" - 11,0" second	Less	2	13%
5.	>11,1" second	Very Less	0	0%
		Total	15	100%

The first aspect studied in this research is the speed aspect. The results can be seen in table 1, namely the level of physical fitness of male athletes in terms of speed is in a good category with a frequency of 1 athlete, the good category is 4 athletes, the moderate category is 8 athletes, the less category is 2 athletes, and there are no athletes who have the very less category. So it can be concluded that the speed aspect of the athlete is in the medium category.

Table 2. Physical fitness level in the aspect of arm muscle strength

No	Score	Category	Frequency	Percentage
1.	< 19	Very Good	2	13%
2.	14 - 18	Good	12	80%
3.	09 - 13	Moderate	1	7%
4.	05 - 08	Less	0	0%
5.	< 04	Very Less	0	0%



Total	15	100%
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The second aspect studied in this study is the aspect of arm muscle strength. From table 2, it is found that there are no athletes who have a category less or very less, there is 1 athlete or 7% has a moderate category, 12 athletes or 80% have a good category, and 2 athletes or 13% has a very good category. Thus, it can be concluded that the level of physical fitness in POPDA male athletes for basketball in Kepahiang Regency on the aspect of arm muscle strength has a good category.

Table 3. Physical fitness level in the aspect of abdominal muscle strength

No	Score	Category	Frequency	Percentage
1.	< 41kali	Very Good	2	13%
2.	30 – 40 kali	Good	7	47%
3.	21 – 30 kali	Moderate	6	40%
4.	10 – 20 kali	Less	0	0%
5.	< 09 kali	Very Less	0	0%
	Total		15	100%

The third aspect studied in this study is the aspect of abdominal muscle strength. Viewed from table 3, it is known that there are no athletes who are in the less and very less category, there are 6 athletes or 40% who have a moderate classification, 7 athletes or 47% have a good classification, and 2 athletes or 13% have a very good classification. So, it can be concluded that the level of physical fitness in POPDA male athletes for basketball in Kepahiang Regency on the aspect of abdominal muscle strength has a good category.

Table 4. Level of Physical Freshness in Aspects of Leg Muscle Power

No	Score	Category	Frequency	Percentage
1.	> 73 cm	Very Good	2	13%
2.	60 – 72 cm	Good	7	47%
3.	50 – 59 cm	Moderate	5	33%
4.	39 – 49 cm	Less	1	7%
5.	< 38 cm	Very Less	0	0%
	Total		15	100%

The fourth aspect studied in this study is the aspect of leg muscle power. From table 4 it is known that there are no athletes who have leg muscle power in the very poor category, there is 1 athlete in the less category, 5 athletes in the moderate category, 7 athletes in the good category, and 2 athletes in the very good category. So it can be concluded that the level of physical fitness of POPDA male athletes in the basketball sport of Kepahiang Regency in the aspect of leg muscle power has a good category

Table 5. Level of Physical Freshness in the Endurance Aspect

No	Score	Category	Frequency	Percentage
1.	<3,14''	Very Good	0	0%
2.	3,15'' - 4,25''	Good	1	7%
3.	4,26''- 5,12''	Moderate	9	60%
4.	5,13'' - 6,33''	Less	5	33%
5.	>6,34''	Very Less	0	0%
	Total		15	100%

The last aspect that is part of this research is the aspect of endurance. Based on table 5, it is known that there are no athletes who are in the poor or very good category, there are 5 athletes or 33% in the poor category, 9 athletes or 60% are in the moderate category, 1 athlete or 7% have good categories. So, it can be concluded that the level of physical fitness in POPDA male athletes for basketball in Kepahiang Regency in the endurance aspect has a medium category. To see the frequency and percentage for each aspect, see Figure 1 below.

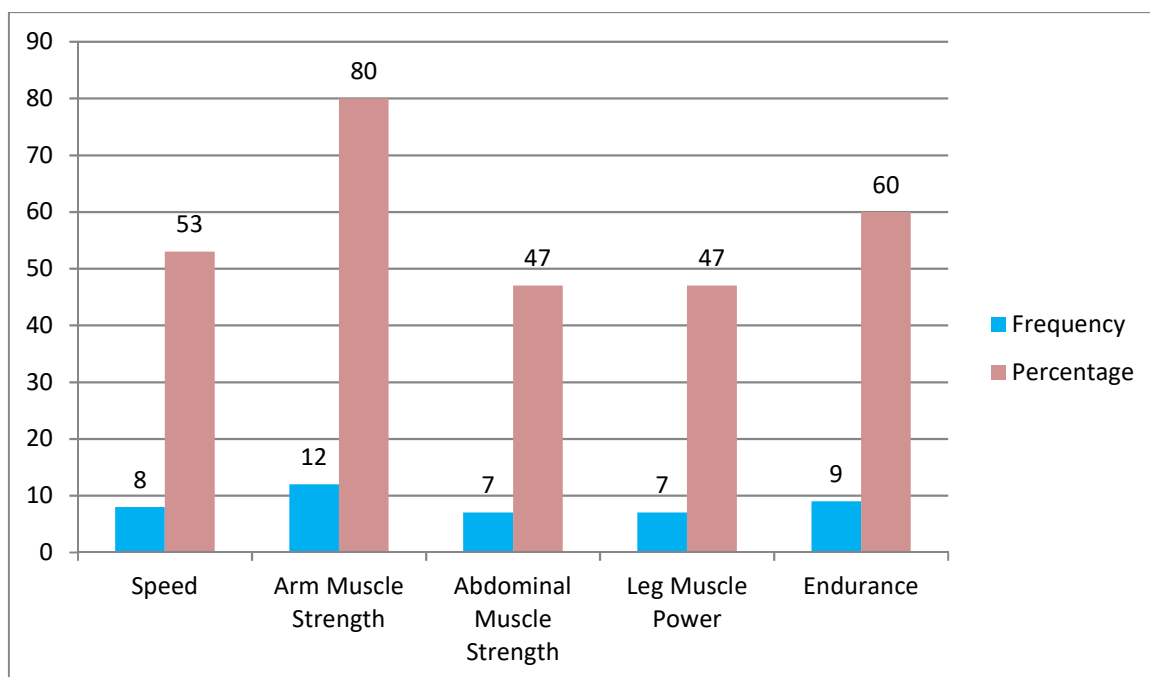


Figure 1. Frequency and percentage of each aspect

DISCUSSION

The results of the study illustrate that on the aspect of speed that is owned by the male basketball athlete, POPDA Kepahiang Regency is in the medium category. The results of this study are in line with previous research conducted (Prihanto, 2016) that the speed aspect of basketball athletes at the high school level is in the medium category. However, other studies say that the speed level of basketball athletes is in the less category. To become an athlete who excels in basketball, a good speed aspect is needed.

Speed is one component of physical fitness that affects the performance of basketball athletes on the field because the hallmark of this sport is high intensity. Speed is the ability of an athlete to be able to perform various movement skills in a very short time. In basketball, the aspect of speed is the determining factor in building attacks and defending against counterattacks. In the research that has been done, it is stated that the aspect of speed possessed by basketball athletes will affect the results of dribbling. This means that the better the speed aspect possessed by the athlete, the better the dribbling results will be (Neldi, 2019). Therefore, the speed aspect needs to be built and developed by every athlete through intensive training (Jeffreys & Goodwin, 2016).

In the aspect of arm muscle strength, the male basketball athletes of POPDA Kepahiang Regency are in a good category. Arm muscle strength contributes greatly to the success of basketball athletes, especially when dribbling, catching, shooting, passing, and rebounding. The better the arm muscle strength possessed by the athlete, the better the athlete's ability to perform shooting movements (Nurul & Nirwandi, 2019). Meanwhile, in the aspect of abdominal muscle strength, the male athletes of POPDA Kepahiang Regency are also in the good category. Meanwhile, in the aspect of endurance, male athletes of POPDA Kepahiang Regency are also in the medium category. Basketball athletes are required to have good endurance to be able to complete games with high intensity in 4 x 10 minutes (Nugraha & Rismayanthi, 2017).

Various factors affect the level of physical fitness of athletes including nutritional status, motivation, duration of exercise, and the training model used (Prabowo et al., 2022; Hoseini &



Hoseini, 2019). Meanwhile, in this research, it was found that the factors that played a major role in influencing the level of physical fitness of male athletes at POPDA Kepahiang Regency were the volume and frequency of exercise. The male athlete of POPDA Kepahiang Regency is a student who is at the high school level so he has many activities both inside and outside school hours where these activities often clash with practice time. As a result, the duration of the exercise will be reduced.

Whereas success in achieving the level of physical fitness is determined by the quality of the exercise which includes the purpose of the exercise, the selection of the exercise model, and the dose of exercise (Ahmadizad et al., 2021). Dosis latihan meliputi frekuensi, intensitas, waktu latihan dan recovery. The exercise dose includes frequency, intensity, time of exercise, and recovery. Therefore, a better time distribution is needed from the coach to overcome the problem of training duration so that it is expected that the dose of exercise is to improve or maintain the athlete's physical fitness (Watson, 2014).

Correct and good sports training will have a real impact on every part of the athlete's body. For an athlete, physical fitness is a very important factor, especially those who are members of the POPDA team of Kepahiang Regency. Athletes with a good level of physical fitness will not easily get tired of doing school activities, training, or competing (Koh et al., 2016). The frequency of training for men's basketball athletes from POPDA Kepahiang Regency is only done 2 times a week.

The training model that is carried out emphasizes more on technical training, tactics, teamwork, and strategy while physical fitness training is not paid attention to. So this resulted in a not optimal level of physical fitness for athletes. Therefore, a better training program is needed, so that the components of physical fitness needed to win matches can be achieved optimally (Baghurst, 2015).

CONCLUSION

The level of physical fitness is one of the prerequisites that must be met by every athlete to achieve success in sports. However, this has not been fulfilled properly by the male athletes of POPDA Kepahiang Regency where the results of the study concluded that the level of physical fitness of the male athletes of POPDA Kepahiang Regency was in the moderate category. It is recommended for athletes to be able to improve physical fitness, especially in terms of speed and endurance.

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