THE SURVEY OF VO₂ MAX LEVEL OF FOOTBALL PLAYERS OF STKIP BINA BANGSA GETSEMPENA BANDA ACEH

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ABSTRACT

This study aims to determine the level of VO₂ max of football players of STKIP Bina Bangsa Getsempena Banda Aceh. This research uses survey method of test, that is by Multistage test and the form of this research is descriptive quantitative. The population of all football players of STKIP Bina Bangsa Getsempena which amounted to 23 players. The determination of the research sample uses total sampling, and then the number of the sample is 23 players. The result of the study of 17.39% of the sample has a good grade VO₂ max category, 73.91% medium category, and 8.70% less category. So it can be concluded that the level of VO₂ max football player STKIP Bina Bangsa Getsempena as a whole is still in the medium category. Therefore, the researcher suggests to the related parties to provide an exercise program that is able to increase the VO₂ max level of the football players as a whole.

Keywords: The Level of VO₂ Max, Football

INTRODUCTION

In football the most dominant characteristics of energy system used are 70% aerobic and anaerobic energy systems is 30%, this is because the players sprint many times to attack, grab the ball or run to secure the area. Aerobic energy systems require oxygen to be continuously channeled to muscle fibers as aerobic metabolism along with carbohydrates, fats and proteins to convert into energy. The maximum energy use through an aerobic system requiring oxygen is limited by the maximum speed of the respiratory system in which oxygen is delivered to the muscles, so football players need to have a good VO₂ Max to supply oxygen to support their
activities during the game. Therefore, before determining the training program that will be given, of course must be done pre-test in advance for the program to be given and executed exactly in accordance with the conditions of team members teams. One test to find out how far the VO2 Max level can be done by performing a Multistage Fitness Test (MFT) test.

STKIP Bina Bangsa Getsempena is a College of Teacher Training Education which has six courses, one of them is the department of Health Education And Recreation (Penjaskesrek). The Penjaskerek program has a Student Activity Unit called Penjdaesrek UKM. This UKM was formed as a place of talent distribution and interest of students in the field of sports. As for one of the existing sports field in this UKM is the football sport namely BBG FC. BBG FC is a football team that often participates in competitions held in Banda Aceh and surrounding areas. But from every of their participation in the competitions, there is no achievement yet.

Furthermore, the researcher interviewed the trainer about the arrangement of the exercise programs and physical fitness tests. Based on the interview results, it can be concluded that the coach arranged the exercise program is not guided by the fitness results of every athlete. In relation to the consideration of the problem above, the researchers are eager to conduct a study entitled "The Survey of Vo2max Level of Football Players of STKIP Bina Bangsa Getsempena Banda Aceh". Based on the background above, it can be formulated the problems in this study as what is the level of VO2 Max of Football Players of STKIP Bina Bangsa Getsempena Banda Aceh? Furthermore, the purpose of this research is to know the level of VO2 Max Football Players STKIP Bina Bangsa Getsempena Banda Aceh.

VO2 max is the maximum oxygen volume that can be used per minute. According to Guyton and Hall (in Giri Wiarto, 2013) VO2 max is the speed of oxygen consumption in maximum aerobic metabolism. According to Thoden in Suranto module (2008: 118) VO2 max is the maximum aerobic capture power describes the maximum amount of oxygen consumed per unit of time by a person during exercise or test, with increasingly severe exercise until fatigue, the size is called VO2 max.

According to Djoko Pekik (2000) the amount of VO2 max or maximum amount of oxygen consumed maximally, that is the number of ML / Kg / BB / Minute. Measurement of the amount of air or oxygen is called VO2 max. Theoretically, the VO2max value is limited by cardiac
output, the ability of the respiratory system to deliver oxygen to the blood, or the muscle's ability to use oxygen. VO2 max is the highest value in which a person can consume oxygen during exercise, as well as a reflection of the cardiorespiratory and hematologic elements of oxygen delivery and the muscle oxidative mechanism. People with a good fitness level have higher VO2 max values and can perform longer lasting activities than those who are not in good condition (Vander, 2001).

Based on the research proposed by Lutan et al. (2000) the benefits of cardio respiratory coaching can reduce the risk of: a) high blood pressure, b) coronary heart disease, c) obesity, d) diabetes, e) cancer, and f) adult health problems. As mentioned above, the great benefits of cardiorespiratory fitness for everyone and especially of an athlete.

Hairy (1989) states that the factors that determine maximal oxygen consumption; First, the heart, lungs, and blood vessels must function properly. Second, the process of delivering oxygen to the tissues by red blood cells should be normal. Similarly, regular blood tests (routine) can determine whether the properties of blood are still normal or not. Therefore, cardiac function, the ability to circulate blood to tissues to utilize oxygen remains a factor that must be measured by measuring maximal oxygen consumption in young people with no disruption or lung disease.

Kusmaedi (2008) reveals, physical fitness is the ability of a person's body to perform tasks and daily work without causing significant fatigue, so the body still has the reservoir of energy to overcome the additional burden. In line with that opinion, Giriwijoyo (2002) reveals, physical fitness is a state of physical ability that can adjust the function of his body equipment to certain physical tasks or to the state of the environment that must be overcome in an efficient way, without excessive fatigue and has recovered perfectly before coming The same task the next day.

According to Nugraha (2013), football is a sport that plays the ball using the foot and has the main goal is to score a goal as many as possible that must be done in accordance with the provisions that have been determined. Hughes (2012) says that a football team consists of 11 individuals, all of which must undertake specific roles and associated functions in each specific position in order to make a successful team.
METHODS

This research is quantitative descriptive research. The method used to collect data is survey method with test and measurement technique. The instrument used is a multistage run test.

RESULTS AND DISCUSSION

Based on the data analysis, it can be obtained the description of VO2 Max capacity of the Penjaskesrek football players of STKIP BBG as follows;

Table 1. Analysis of capacity description of VO2 Max of the Penjaskesrek football players of STKIP BBG:

<table>
<thead>
<tr>
<th>No</th>
<th>Criteria</th>
<th>Category</th>
<th>Amount</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>More or 52.1</td>
<td>Very Good</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>42.1s/d5</td>
<td>Good</td>
<td>4</td>
<td>17.3%</td>
</tr>
<tr>
<td></td>
<td>34.1s/d4</td>
<td>Medium</td>
<td>1</td>
<td>73.9%</td>
</tr>
<tr>
<td>4</td>
<td>28.1s/d3</td>
<td>Less</td>
<td>2</td>
<td>8.70%</td>
</tr>
<tr>
<td>5</td>
<td>Less or 28.0</td>
<td>Less</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Source: Data of the Research, 2017

Table 1 shows that; The number of the samples included in the excellent category with susceptible values of more than 52.1, no (0) sample with percentage of 0%. Number of samples included in good category with susceptible value between 42.1 up to 52 is 4 sample with percentage 17.39%. The number of samples included in the moderate category with susceptible values between 34.1 to 42 is 17 samples with a percentage of 73.91%. The number of samples included in the category of less with susceptible values between 28.1 to 34 is 2 samples with percentage 8.70%. And the number of samples included in the category of less once with a vulnerable value of less than 28.0 ie no (0) sample with a percentage of 0%.
Based on the results of the study, it is obtained the description of the capacity of VO2 Max of Penjaskesrek football players of STKIP BBG included in the category of medium. With an overview of the results of the capacity of VO2 Max, there are things that can affect the capacity of VO2 Max of Penjaskesrek football players of STKIP BBG as follows:

1. The process of training that has been done, namely the training time is so short. Training time that has been practiced by the trainer is only one hour per meeting and during one practice it is only done twice.
2. Irregular lifestyle, ranging from daily diet, sleep late at night. This happens because the players of Penjaskesrek football club of STKIP BBG are living in a boarding house with low and middle economic background, so they use some of their spare time to work. That affects their irregular lifestyle.
Sharkey (2003) states that the value of a person's VO2 Max capacity will decrease slowly as he continues the less active lifestyle, because what is done day by day, year after year will shape health, vitality and quality of life.

CONCLUSION

Based on the obtained result, the level of VO2 Max of football players of STKIP BBG Banda Aceh is in a good category at 0%, good category is about 17.39%, medium category is equal to 73.91%, enough category is equal to 8.70% and less category is 0%. So it can be concluded that the level of VO2 Max of football players of STKIP BBG is in the medium level.

REFERENCES


