



VO2max Level of Women's Futsal Players (UIR Student Activity Unit)

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ABSTRACT

ARTICLE INFO

The purpose of the study. The aim of this research is to determine the level (VO2Max) in the UIR Student Activity Unit.

Materials and methods. The population in this study were 15 female futsal players at the Riau Islamic University. This study uses a descriptive method, which can be interpreted by describing or describing the current state of the research subject/object based on the facts that appear. the type of research is descriptive in which the variables studied are independent about the VO2 max of female futsal players which is measured by the bleeb test.

Results. The average score for the VO2 Max level test for the Women's Futsal Student Activity Unit at the University of Islam Riau with a score of 22.21%. Judging from the norm of the VO2 Max level, the category is classified as not good.

Conclusions. Based on the data analysis that has been carried out, it can be concluded that the VO2 Max level of the Players of the Women's Futsal Student Activity Unit with an average value of 22.21% which is located at the interval of 20.00 – 21.27 with a percentage of 40% in the category of Less Once.

Keywords: *vo2max level; women's futsal players.*



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INTRODUCTION

At the present time the most popular sport among the public is futsal. The popularity of futsal is not only known as an achievement sport, but also often as a health or recreation sport. Futsal has become a practical and inexpensive sport for the community because of the many facilities and infrastructure of futsal today and can be a place to play and compete for players.

Futsal is a sport that is included in the big ball game. According to Asriady (2014) futsal can be interpreted as a sport played by two different teams. Each team consists of five players who play the game in two halves. Futsal sport is shown to form a blend of individual players who join a team to achieve victory. Futsal has developed into one of the alternative soccer games that have efficient use of land or a smaller playing field.

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Therefore, futsal is considered a game that is able to provide the same sensation of playing as in a football game.

According to Lhaksana (2011) futsal is a game using a relatively small field with a very fast and dynamic game followed by stricter rules. According to Asriady (2014) in a futsal team that plays are 5 players, 4 players are positioned as the strategy set by the coach, while one player is positioned as a goalkeeper. In order to outwit opposing players in a futsal game, a futsal player must have the ability to dribble. According to Ahmadi (2017) dribbling is one of the ways allowed by the regulations to carry the ball away in all directions. Futsal sports in general must have the agility to move from one position to another and must also have good respiratory endurance. This is closely related to the vital capacity of the lungs. If a person has a good vital lung capacity, his respiratory endurance will also be good so that in playing futsal.

The game of futsal requires good aerobic endurance skills. In addition, a high VO2max is a very high priority, because futsal games require strong energy and endurance to play. According to (Sugihartono, 2014) VO2 Max is the maximum amount of oxygen that can be consumed during intense physical activity until fatigue occurs and VO2 Max is expressed in liters\minutes\kilograms of body weight. In general terms, it is the maximum volume of O2 processed by the human body when carrying out intensive activities. As for the one that affects the sport of futsal, one of them is physical. Speaking of physical abilities, it will be related to cardiorespiratory. Basically, there are two types of cardiorespiratory resistance, namely aerobic and anaerobic. Aerobic exercise is a sport that is done continuously and tends to use oxygen. While anaerobic exercise is a sport that tends to increase muscle strength, such as weightlifting. Measurement of cardiorespiratory resistance for aerobic capacity can be done by measuring maximal oxygen consumption (VO2Max).

VO2Max is a person's ability to breathe and use oxygen optimally in carrying out activities or sports activities, especially futsal, so that they experience fatigue. VO2max is the maximal oxygen intake (consumption) per minute that describes a person's aerobic capacity. This is reinforced by the opinion put forward by Wiarto in the journal oxygen consumption. Ainul Mustakhim VO2 max is the maximum volume of O2 that is processed by the human body when doing intensive activities. If a person has a high

VO2Max then the level of aerobic fitness is also high. With good cardiorespiratory resistance, you are able to perform maximum physical activity for a long time (Nurhasan, 2005).

Maximum Oxygen Volume can be referred to as VO2Max can be defined as the body's capacity to take in, transport and use oxygen in exercise (Safitri, 2015) To increase VO2Max apart from genetics, physical exercise is also necessary. Aerobic fitness score (VO2Max) has been seen as the best way to measure fitness and is also believed to have a relationship with health as well as work and exercise performance (Sharkey, 2003).

Gender is very influential on the physical condition of men and women. This happens to cardiovascular endurance or VO2Max. On average, young women have between 15-25% less aerobic fitness than young men and this depends on their activity level. However, in trained young women, the difference is only 10% below male athletes of the same age range. The performance of the women's futsal players at the Islamic University of Riau is a little unstable, sometimes playing with maximum performance and also playing in less than prime conditions. This can happen because the players do a lot of activities so that there is fatigue. So futsal players need to have a good VO2 Max to be able to supply oxygen to support their activities during the game. The higher the VO2max, the longer the muscle's ability to work, meaning that the muscles don't tire quickly, on the contrary, the lower the VO2max, the faster the muscle's ability to do work, so that the muscles get tired quickly (Ganon, 2002).

In order to get a logical thought at the VO2 Max level for female futsal players at the Islamic University of Riau, the author describes the conceptual framework of this proposal. The level of VO2 Max that a person has becomes an important role in carrying out sports activities or daily activities. By having a good VO2 Max level, someone is able to play futsal for a longer time than someone. VO2 Max is a measurement of the amount of air or maximum oxygen. Means meaning volume, O2 means oxygen, max means maximum. The rate at which oxygen consumption will not continue to increase is called the maximum amount of oxygen uptake, maximum oxygen consumption or VO2 Max.

Thus VO2 Max means the volume of oxygen that the body can use when working as hard as possible with a low VO2 Max capability. The VO2 Max test measurement uses the VO2 Max test, namely the bleep test. From the bleep test, it can be used to determine the level of VO2 Max. in the test can be a benchmark for coaches to determine the level of VO2 Max athletes.

Based on the explanation above, VO2 Max plays a very important role in determining the success and achievements of women's futsal players. This is because futsal has mental, physical elements, as well as good VO2 Max levels in its activities, so that by having good mental, physical and VO2 Max levels, a maximum and achievement futsal game can be created.

MATERIALS AND METHODS

Study participants

population is the entire research subject. The population in this study were 15 female futsal players from the Islamic University of Riau.

Study organization

This research is a descriptive research, which is a research that aims to find out and get a picture or real reality from the reality of the object under study without any intention to draw conclusions that apply generally. the type of research is descriptive where the variables studied are independent about the VO2 max of female futsal players.

Testing Procedur

Data collection instruments used in the study were documentation, observation, tests, participant observations and field notes. The test is carried out at the end of each cycle using the bleep test method as a measuring tool, namely, running back and forth 20 meters, aiming to monitor the development of maximum oxygen uptake (VO2Max) and then consulting with the table of physical fitness norms in age groups.

One of the VO2 Max measuring tests is the bleep test, according to Iztok Kavcic et al. (2012) that the bleep test is a popular field test used to find the approximate value of VO2max. Bleep Test Is a test that uses the rhythm of music and also its implementation, namely the rhythm is gradually from one stage to the next the frequency is increasing.

RESULTS

Data Tes Bleep Test Pemain Unit Kegiatan Mahasiswa (UKM) Futsal Putri Universitas Islam Riau

Based on the results of the bleep test for the female Futsal student activity unit (UKM) players at the Islamic University of Riau. The results of the bleep test were obtained from the data collected from 15 futsal players, the sample obtained the highest score of 26.4 and the lowest score of 20.0.

Table 1. Distribusi Fekuensi Data Hasil Dari Bleep Test Pemain Unit Kegiatan Mahasiswa (UKM) Futsal Putri Universitas Islam Riau.

No	Intervals	Absolute Frequency	Relative Frequency	Category
1.	20,0 – 21,27	6	40 %	Less Once
2.	21,28 – 22,55	3	20 %	Not enough
3.	22,56 – 23,83	3	20 %	Medium
4.	23,84 – 25,11	1	6,66 %	Good
5.	25,12 – 26,40	2	13,34 %	Very good

Research Results Data

From the research data analysts who tested the truth, the facts found were the VO2 Max level of the female Futsal Student Activity Unit (UKM) players at the Islamic University of Riau from the results of the tests and what had been done.

Table 2. Table Category Category Level VO2 Max Players Student Activity Unit (UKM) Women's Futsal.

No	Category	Intervals	Frequency	Percentage
1.	Baik Sekali	20,00 – 21,27	6	40%
2.	Baik	21,28 – 22,55	3	20%
3.	Sedang	22,56 – 23,83	3	20%
4.	Kurang	23,84 – 25,11	1	6,66%
5.	Kurang Sekali	25,12 – 26,40	2	13,34%
Jumlah			15	100%

It can be added up, namely the average test score for the VO2 Max level of the Women's Futsal Activity Unit with a score of 22.21%. Judging from the VO2 Max level norm, the category is classified as not good. By obtaining the test results according to the data described in the data analysis section above, it is known that the VO2 Max level of female futsal players is in the Less Once category.

DISCUSSION

Physical condition can be interpreted as a physical condition that describes a person's ability to do a particular job quite well. If a person has a good physical condition, he will easily carry out daily activities and vice versa if a person's physical condition is in the low category then he will feel tired quickly. An athlete should have a good physique, to make it easier to do sports, especially futsal. Physical condition is the extent to which one can perform or carry out sports. Based on the theory that has

been described, the physical condition can be interpreted as one of the necessities of human life because the physical condition is closely related to human activities in carrying out work and other activities including sports without experiencing significant fatigue so that they are still able to do other activities. Based on the results of the calculations and analysis of research data, it can be seen that the level of physical condition or VO2 Max of female Futsal players at the Islamic University of Riau is in the very poor category with an average value of 22.21%. This can be seen based on the results obtained, it can be concluded that female Futsal players at the Islamic University of Riau must improve their training so that the physical condition of the futsal athletes becomes better.

CONCLUSION

Based on the data analysis that has been carried out, it can be concluded that the research entitled VO2 Max Level of Women's Futsal Players at Islamic University of Riau with an average value of 22.21% which is located at intervals of 20.00 – 21.27 with a percentage of 40% in the category of Less Once.

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APPENDIX

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