

Endurance Analysis of Taekwondo Athletes in Central Sulawesi Province, Indonesia



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ABSTRACT: This study aims to determine the endurance of athletes in the sport of taekwondo, Central Sulawesi Province. This research is a type of qualitative descriptive research. The population in this study were all Taekwondo athletes with a sample of 7 people. The data analysis technique in this study was carried out using a descriptive analysis design based on the results of tests and measurements. The results of the endurance test of male taekwondo athletes with the bleep test type, the overall average Vo2Max endurance of male taekwondo athletes with an average level is 9.00 and the return is 3.60, with the overall average score of male taekwondo athletes is 2.20 is included in the less category. Meanwhile, based on data on the physical condition of female taekwondo athletes with the bleep test type, the overall average Vo2Max endurance of female taekwondo athletes with an average level is 6.00 and the return is 5.50, with the overall average value of female taekwondo athletes is 2.00 included in the less category. Based on these data, it can be concluded that the average endurance value of male and female taekwondo athletes in Central Sulawesi is in the poor category.

KEYWORDS: Endurance, Athlete, Taekwondo

INTRODUCTION

Endurance is a condition or condition of the body that is able to carry out activities for a long duration of time without feeling excessive fatigue after completing the activities carried out. Ichsan (2011) explains the notion of endurance as the ability of the body to carry out activities for a long duration of time without feeling a significant sense of fatigue after completing an activity. This endurance is called circulatory-respiratory endurance or cardiovascular endurance.

VO2max is the maximum oxygen volume and a level of body competence expressed in mm per minute or liters per minute/kg body weight (Nirwandi, 2018). Basically, endurance can be interpreted as the ability to overcome fatigue. However, by definition, it includes the ability of the organism's body parts to cope with various perceived complaints caused by loading for a long time (Fitrah, A., Kiram, Y., 2019). VO2max is the maximum limit of oxygen contained in the human body which occurs due to loading for a relatively long time duration. Volume VO2max is the maximum volume of O2 that is processed by the human body when carrying out very intensive activities. VO2max is an increase in body competence expressed in liters per minute or millimeters per minute per kilo of body weight.

In taekwondo, kyorugi and poomsae require good endurance to face a match with a long and exhausting time duration. When an athlete has excellent endurance, it will maintain the performance he has during the match (Rizkiyanto et al., 2019). Aerobic endurance is one of the most influential aspects when running kicks, this is stated to be influential because when running kicks athletes not only need strength but also require aerobic endurance. If it is not balanced with aerobic endurance, of course this will make the kick not optimal, therefore it does not produce a good score during the match (Ihsan et al., 2018)

Oxygen is one of the most important things. This is because oxygen is the fuel needed by a person and is one of the aspects needed by muscles in carrying out heavy and light activities. Various sports certainly require VO2max to support matches (Septian and Jatmiko, 2019). A person who has a large or high VO2 max can not only carry out endurance activities well but more than that they will be able to carry out a shorter physical recovery compared to an individual who has a low VO2max. Therefore, the athlete's ability to carry out further activities is shorter and can last for a longer duration of time (Busyairi and Ray, 2018). If the VO2max has a higher value, the athlete will have better endurance and can minimize the fatigue experienced by the athlete. This is because the oxygen available is sufficient so that it can increase concentration and increase self-confidence due to a good physical condition.

Taekwondo is competed in a duration of 2 to 3 minutes and for three rounds. The long duration of time requires athletes to perform intensive and structured endurance training. Endurance training that is usually given to athletes is using interval training, Hugo sparring, fartlek, target sparring, target circuit and so on.

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METHODS

This research is a type of qualitative descriptive research. The population in this study were all Taekwondo athletes with a sample of 7 people. The data analysis technique in this study was carried out using a descriptive analysis design based on the results of tests and measurements.

RESULT AND DISCUSSION

Table 1. Endurance test results for male taekwondo athletes

Number	Name	Bleep Test	
		Level	Return
1	Johansen	10	9
2	Abdul	11	2
3	Rafik	10	1
4	Lukas	7	2
5	Rizki	7	4
Average		9.00	3.60

Based on the physical condition data above, it is explained that the physical condition of the male taekwondo athletes with this type of bleep test test, the overall average Vo2Max endurance of male taekwondo athletes with an average level is 9.00 and the return is 3.60, with an average value Overall male taekwondo athletes are 2.20 included in the less category.

Table 2. Endurance test results for female taekwondo athletes

Number	Name	Bleep Test	
		Level	Return
1	Firilia Dinisa Darani	8	3
2	Tri Fita Anggriani	4	8
Average		6.00	5.50

Meanwhile, based on the physical condition data above that the physical condition of female taekwondo athletes with the bleep test type, the overall average Vo2Max endurance of female taekwondo athletes with an average level is 6.00 and the return is 5.50, with an average value Overall female taekwondo athletes are 2.00 included in the less category.

An athlete has optimal endurance if the athlete does not get tired easily or can continue to move when he is tired. The endurance of various biomotor abilities must be developed beforehand. If muscle endurance is the ability of the muscles to carry out contractions continuously for a long time. Various athletes who have good muscle endurance will make them able to continue to be active in various activities that require strength for a long duration of time. Therefore, various athletes in these sports must be given various special exercises to develop muscle endurance, especially in some of the muscles that are most needed. Therefore, it can be stated that if he is resistant, it is related to cardiovascular endurance, namely circulating blood circulation, heart and respiration. Taekwondo athletes who have optimal endurance will be able to concentrate and in turn can develop taekwondo tactics and techniques optimally. Providing an increase in cardiovascular and pulmonary endurance in particular can be achieved through efforts to increase optimal anaerobic power.

CONCLUSION

Based on these data, it can be concluded that the average endurance value of male and female taekwondo athletes in Central Sulawesi is in the poor category.

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