

Factors Influencing

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Factors Influencing Semarang City Taekwondo Achievement in PORPROV XVI 2023

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Abstract

There are various factors that influence achievement such as infrastructure, psychology, physical condition, techniques and strategies. Endurance is one of the factors that influences the high performance of athletes. Endurance is described by the level of maximum oxygen volume or VO2Max. VO2Max is the ability to consume oxygen during physical activity. A high VO2Max level will help athletes achieve high performance because athletes will not easily experience fatigue during high-intensity matches and speed up the recovery process. The aim of this research is to find out the factors that influence the decline in performance of Semarang City taekwondo athletes who, when pre-porprov won 6 gold medals, during pre-provinc training dropped to 3 gold medals if seen from the physical condition. The method in this research is a survey to determine VO2Max levels, the research instrument used is the Multi Fitness Test to measure VO2Max levels. The sample in this study was 20 taekwondo athletes from Semarang City. Data analysis is used by categorizing the results of the physical condition test into 5 categories, namely poor, below average, average, above average, very good. The results in this study were 12 athletes in the average VO2Max category and 12 athletes in the above average category. The 5 athletes who won gold medals had VO2Max levels above the average and the 6 athletes who did not get medals were in the average category. To get a high achievement you need a high VO2Max level. The conclusion is that most of the taekwondo athletes in Semarang City have a VO2Max level in the average category, so training is needed to increase VO2Max in order to achieve high performance.

Keywords : physical condition, VO2Max, taekwondo

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INTRODUCTION

Sport is an activity carried out to repair, maintain and increase fitness, speed up the injury recovery process (Sandi, 2019). Sport is a programmed and planned physical activity that is carried out continuously to improve fitness (Hadi, 2020). Based on these sources, it can be concluded that sport is an activity that involves the physical and psychological to improve health and physical fitness.

There are several purposes for someone to do sports, from just to gain health, to the aim of achieving achievement. Sport is something that aims to achieve achievement through physical and mental activity (Kuntjoro, 2020). Another source says that people's purpose in exercising is to gain health, a means of socializing and filling free time (Tarmizi, Bangun, & Supriadi, 2020). Based on these sources, it can be concluded that sport aims to improve health, fitness, as a means of socializing, to fill free time and to achieve achievement. The law divides sports into 3 scopes, namely educational sports, community sports, achievement sports (Pemerintah, 2022). The coaching process in sports will be successful if you have a good training program (Nugraha & Pratama, 2019). To get good performance, good physical, technical, mental and infrastructure are needed (Nugroho, 2017). It requires several elements that are interrelated and cannot be separated from each other, namely: physical, technical, tactical, mental and infrastructure suggestions. Physicality is the most important factor that influences athlete performance, such as strength endurance and flexibility (Maliki, Hadi, & Royana, 2017).

One sport is taekwondo, taekwondo is a martial arts sport from Korea that uses hands and feet consisting of kyurugi or fighting numbers and poomsae or art, the dominant sport of taekwondo requires physical conditions, especially endurance and explosive power (Wahyuni & Donie, 2020). Another source says that the sport of taekwondo requires endurance, speed and power (Darmanto, 2015). Based on these two sources, it can be concluded that taekwondo requires elements of physical condition, endurance and explosive power to be able to perform taekwondo movements optimally and to improve performance.

Elements that influence athlete performance are the state of infrastructure, match situation, psychology, athlete's skill level, athlete's physical condition, body condition and state of tactical and strategic abilities (Effendi, 2016). Athletes' achievements are influenced by internal and external factors, namely: facilities and infrastructure, coach

competency, training programs, techniques, tactics, psychology, physical condition, environment, family and friends (Maizan & Umar, 2020). In coaching and improving athlete performance there are four basic components, namely: Physical, Technical, Tactical, Mental (Pujianto, 2015). There are various factors that influence athlete performance, namely: infrastructure, environment, psychology, physical and technical. Factors that influence performance according to several sources have one thing in common, namely the physical condition factor, if you don't have a good physical condition when you are tired, then good techniques will not be able to be used because no energy is used.

Table 1. Semarang City Taekwondo medals won in Pre PORPROV and PORPROV 2023

EVENT	GOLD	SILVER	BRONZE	TOTAL
PRA POPROV	6	1	5	12
PORPROV	3	2	6	11

Semarang City Taekwondo became the overall champion at Pre-PORPROV XVI 2022 by winning 6 gold medals, but at the main event, namely PORPROV Researchers want to know what caused Semarang City's Taekwondo performance to decline. There are several factors that influence athlete performance, namely environment, psychology, infrastructure, physical, technical and tactics (Maizan & Umar, 2020). Researchers want to look at the factors that influence the performance of Semarang City Taekwondo athletes in terms of physical condition. A study states that athletes who have high achievements also have good physical condition (Ambara, 2017). It is thought that the decline in performance of Semarang City taekwondo athletes is partly due to physical condition factors, so it is necessary to explore the physical condition of Semarang City Taekwondo athletes.

Having excellent physical condition is an advantage and advantage, namely being able to practice new difficult movements, not getting tired easily, being able to complete training programs and matches without problems, speeding up the recovery process after heavy training (HB & Sujana, 2006). Based on this source, researchers consider that physical condition plays a very important role in an athlete's victory in a competition, without forgetting other factors that influence an athlete's performance.

One of the dominant aspects of physical condition that athletes must have is endurance, cardiac endurance is the most important element of physical condition in physical fitness (Ninzar, 2018). Endurance is when someone carries out activities for a long time without getting tired (Atradinal, 2018). Endurance is an aerobic activity that

requires oxygen that is used for a long time, such as swimming, cycling and running (Satria, 2019). Another source believes that endurance is an athlete's ability to control the level of fatigue when physical activity is carried out for a long time (Sepriadi, Arsil, & Mulia, 2018). Endurance is divided into 2, namely general endurance and special endurance. General endurance is heart and lung endurance, while special endurance is muscle endurance (Umar & Fadilla, 2019). Based on these sources, it can be concluded that endurance is a person's ability to control fatigue when doing physical activity for a long time, which consists of heart, lung and muscle endurance.

Maximum Oxygen Volume or VO2Max is an indicator of a person's endurance level. Maximum Oxygen Volume is the fastest ability to use oxygen during physical activity. The higher the VO2Max level, the faster the recovery period after activity and the better the fitness (Widiawati, 2020). VO2Max is a person's ability to use oxygen when working in units of ml/kg/minute. Based on several sources, it can be concluded that Maximum Oxygen Volume or VO2Max is a person's ability to consume as much oxygen as possible when doing physical activity so that fatigue does not occur, which is seen in units of ml/kg/minute.

METHOD

This research method is a survey to determine the level of physical condition of Semarang City Taekwondo athletes because one of the factors that influences performance is physical condition. The location of the research was carried out at the Tri Lomba Juang Sports Hall, Semarang City, when the research was carried out on July 1 2023. The population in this study was taekwondo athletes from Semarang City, the sampling technique used was a total sample with a sample size of 20 athletes.

The test instrument in this study used the Multi Fitness Test or Bleep Test, namely a test instrument to determine endurance which is described by the VO2Max level or maximum oxygen volume. The data analysis used is to categorize the results of the Multi Fitness Test or Bleep Test endurance test with 5 categorizations, namely: poor, below average, average, above average and very good. After analyzing the data, the endurance category of each Semarang City Taekwondo athlete will be visible so that it will be possible to know whether physical condition factors influence the decline in Semarang City Taekwondo performance.

RESULT

Based on the results of research in the form of a survey to see the level of physical condition in the form of endurance using the Multi Fitness Test or Bleep test instrument, the following results were obtained.

Table 2. Research Data Results

NAME	VO2MAX	CATEGORY	MEDAL
DF	50	Average	Bronze
YG	50	Average	Silver
MV	55	Above Average	Gold
WY	54	Above Average	Gold
MY	46	Above Average	Gold
SF	54	Above Average	Gold
RK	47	Average	Non Medal
DN	50	Average	Bronze
MARTA	44	Average	Bronze
OL	40	Average	Non Medal
AN	49	Average	Non Medal
YD	42	Average	Bronze
TL	45	Above Average	Bronze
RN	45	Above Average	Bronze
MR	43	Average	Bronze
UL	43	Average	Non Medal
DR	47	Above Average	Bronze
SN	43	Average	Non medal
JS	47	Above Average	Gold
AN	42	Average	Non Medal
	47	Average	

Based on the research data above for the Multi Fitness Test test instrument to determine endurance as measured by the VO2Max level, from a total of 20 athlete samples, 12 athletes fell into the average category and 8 athletes fell into the above average category. The athlete with the lowest VO2Max is 42 and the highest VO2Max value is 55 and the average VO2Max for Semarang City Taekwondo athletes is 47 which is in the average category.

DISCUSSION

Based on research data analysis, it was found that the average VO2Max level of Semarang City Taekwondo athletes was in the average category. A total of 12 athletes or 60% of athletes fall into the average category and 8 athletes or 40% of athletes fall into the above average category. based on the results of interviews with 12 athletes in the VO2Max category, the average consisted of 1 athlete who won a silver medal, 5 athletes who won a bronze medal and 6 athletes who did not get a medal. The 8 athletes with a VO2Max category above the average were 5 athletes who won gold medals and 3 athletes who won bronze medals.

The 6 athletes who did not win medals had average VO2Max levels and the 5 athletes who won gold medals had above average VO2Max levels. In the sport of taekwondo, the basic physical component that must be possessed is endurance as seen from the VO2Max level, with good endurance it will help athletes win matches (Wahyuni & Donie, 2020). In taekwondo, to achieve victory, good endurance and speed are needed (Wibandoro, 2017). Based on these sources, it is stated that endurance is important for the sport of taekwondo to support technique and improve performance, so a taekwondo athlete must have good endurance, indicated by a high VO2Max level if he wants to achieve high performance.

Most of the VO2Max levels of Semarang City taekwondo athletes were in the average category, 6 athletes who did not get medals were also in the average category, and 5 athletes who won gold medals had VO2Max levels above average. This is in line with previous research or previous research that if you want to achieve high performance you must have a good VO2Max level. A study concluded that one thing that influences achievement is endurance (Tanzila & Febriani, 2019). Semarang City taekwondo athletes with high VO2Max were able to get gold medals and athletes with average VO2Max levels got silver, bronze medals and 6 athletes did not get medals. By having good endurance, an athlete will be able to train for a long time when training and competing compared to athletes with low VO2Max levels who easily experience fatigue (Nurokhman, 2019).

Endurance is a basic ability that athletes must have to achieve high performance, because by having good endurance an athlete will be able to use all the techniques they have (Atradinal, 2018). Based on several previous studies regarding the importance of

endurance to improve sports performance, Semarang City taekwondo athletes need increased endurance to achieve high achievements because good endurance or a high level of endurance is directly proportional to high performance.

CONCLUSION

The endurance level of Semarang City taekwondo athletes is mostly in the average category, this is one of the factors that influences the decline in performance of Semarang City taekwondo athletes. Some experts say that if you want to achieve high performance, increase your endurance. By having good endurance, it can reduce the level of fatigue so that athletes are able to carry out the instructions given by the coach well, using all their abilities, but on the other hand, if endurance is low, the oxygen supply to the brain will also decrease, which will reduce the athlete's concentration when competing. high intensity.

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