Body Mass Index: An Analysis Study on Football Athletes

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Abstract. This study aims to analyze the characteristics of the body mass index of soccer athletes. This study uses a qualitative descriptive research method. Sampling in this study used a total sampling technique so that the entire population was taken as a sample of 20 people. The instrument used for data collection uses the Body Mass Index (BMI) instrument. Benchmark Reference Assessment (PAP) based on Body Mass Index (BMI) criteria became the basis for analyzing the data and then analyzing it with the help of Ms. Excel. The results showed that the body mass index (BMI) of Football Academy talent football athletes showed an average score of Normal BMI, but there were two athletes who were in BMI with the criteria of being overweight 5%, the total percentage of BMI obesity was 10%, normal BMI was 50% , and 35% lean BMI. The conclusion from this study is that the athletes at Talenta Football Academy have problems with their body mass index, this is because 50% of the athletes have an abnormal body mass index classification, this is feared to hinder Talenta Football Academy's overall performance. The researcher advises the management of Talenta Football Academy to be able to pay attention to the nutritional status of each athlete and to be able to make food programs for athletes and to evaluate their nutritional status every month by measuring their body mass index.

Keywords: Body Mass Index; Football

INTRODUCTION

Football is one of the most popular sports in the community, playing football will create good character in every player, such as good cooperation, discipline and social good. Football, which is a sport with a relatively long playing time, which is 45 minutes x 2, requires each player to be in good physical condition. One of the supporting factors for the physical condition of an athlete to keep fit is body structure and in football a player is required to have an ideal Body Mass Index (BMI)(Mahfud Imam, Gumantan Aditya, 2020). If a player has a small body it will make it easier for opposing players to deal with

him, as well as a player who is overweight or obese will have his own obstacles such as fatigue (ANNET & Naranjo, 2014). Body weight in kilograms and height in meters are the basic data for searching for body mass index (Dhara & Chatterjee, 2015).Therefore researchers feel it is very important to analyze the body mass index of football athletes Talenta Football Academy.

METHODS

This research is a qualitative descriptive research. The research was conducted at the Talenta Football Academy. Sample of 20 players aged 15-16 years. Research design as follows.
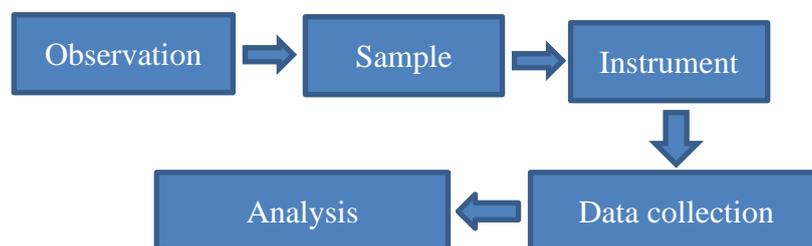

Figure 1. Research Design

The data collection technique for measuring the BMI of Talenca Football Academy athletes is as follows.

$$IMT = \frac{Berat\ Badan\ (kg)}{Kuadrat\ Tinggi\ Badan\ (m^2)}$$

Table 1. Body Mass Index Classification

Klasifikasi	Indeks Massa Tubuh (IMT) (kg/m2)
Kurus	IMT < 18,5
Normal	IMT ≥18,5 - <24.9
Berat Badan Lebih	IMT ≥25,0 - <27
Obesitas	IMT ≥27,0

(Kemenkes RI, 2018)

RESULTS AND DISCUSSION

Table 2. Talenta Football Academy Athlete Body Mass Index Results

No	TB (M)	BB (Kg)	IMT	Classification
1	1.6	50	19.53	Normal
2	1.6	49	19.14	Normal
3	1.63	55	20.70	Normal
4	1.66	55	19.96	Normal
5	1.63	68	25.59	Overweight
6	1.55	48	19.98	Normal
7	1.62	73	27.82	Obesity
8	1.56	48	19.72	Normal
9	1.65	75	27.55	Obesity
10	1.65	52	19.10	Normal
11	1.78	50	15.78	Kurus
12	1.73	53	17.71	Kurus
13	1.59	45	17.80	Kurus
14	1.6	48	18.75	Normal
15	1.58	42	16.82	Kurus
16	1.63	46	17.31	Kurus
17	1.6	45	17.58	Kurus
18	1.72	57	19.27	Normal
19	1.68	55	19.49	Normal
20	1.6	40	15.63	Kurus
Rata-rata	1.633	52.7	19.76	Normal

Judging from the data table 2 shows that there are 10 Talent Football Academy athletes who have a normal body mass index classification if calculated as a percentage of 50%, for thin classification as many as 7 athletes or 35%, Overweight as much as 1 athlete or 5% and Obesity as many as 2 athletes or 10 %. Then from the research results, it was found that the average body mass index of Talenta Football Academy athletes has a Normal classification with a value of 19.76.

Based on the results of the study, it is necessary to pay attention to the body mass index of talented football academy athletes, this is because 50% of athletes have a body mass index classification that is not normal or not ideal. If this condition cannot be resolved, it will affect the athlete's game in later match activities. A soccer athlete who has an ideal body posture can move quickly, agile compared to an athlete who has a thin body and is overweight (Mahfud Imam, Gumantan Aditya, 2020). An athlete who has an ideal body mass index, the athlete will also have good agility (Pranata, 2019). Soccer players who have ideal height and weight will easily perform all soccer skills and vice versa if soccer players do not have ideal height and weight it will hinder their development of the ability to play soccer (Fakhrullah, 2017).

CONCLUSION

The conclusion from this study is that the athletes at Talenta Football Academy have problems with their body mass index, this is because 50% of the athletes have an abnormal body mass index classification, this is feared to hinder Talenta Football Academy's overall performance. The researcher advises the management of Talenta Football Academy to be able to pay attention to the nutritional status of each athlete and to be able to make food programs for athletes and to evaluate their nutritional status every month by measuring their body mass index.

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