

## **Anthropometric and Physiological Criteria in Selection of Team National Football U17**

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### **Abstract**

**The purpose of the study** to explore the main medical-sport data for the selection of national team players U 17. There are many factors important in determining the success of a soccer player. Soccer players have to adapt to the physical and physiological demands of the soccer game. Players may not need to have an extraordinary capacity within any of the areas of physical performance but must possess a reasonably high level within all areas.

**Methods.** In this research are included 35 players who did not pass the age of 17 years. The searches were conducted in the sports lab certified in March 2018, the NSC. Footballers do complete blood and urine tests. For the study effect we have evaluated some data: hemoglobin, age, height, weight, percentage fat, aerobic power absolute and relative values. S A was realized using software, IBM SPSS 20.

**Results.** In this research the height is  $175,129 \pm 5,679$  which indicates that the demand for high stature players continues. Weight, mass index and fat percentage show that players are in regular football body composition. Absolute aerobic power  $2,546 \pm 0,370$  and relative  $40,054 \pm 5,644$  indicates that this physical fitness for age is lowered. The hemoglobin average in our values is  $12, 23 \pm 0.869$ , which is below normal sports limits.

**Conclusions.** Selection of players at the elite level needs some specialist from various fields in sports, where in addition to external visibility, sportsman should be evaluated by functional and psychological side.

**Keywords:** Soccer Player; Analysis; Hemoglobin; Body Mass; Selection; Elite.

## **Introduction**

In the selection of athletes, there is a rule that must be followed by all the specialists. It is a physically-functional constitution set by the player, compared to the other athletes of other profiles. Furthermore, the player must have top list of other qualities, such as technical, tactical and psychological. So there are special groups that select and confidently give the coach the required team, which at the same time is also selective (Rusi,2013).

Soccer is one of the most widely played and complex sports in the world, where players need technical, tactical, and physical skills to succeed. The game is physically demanding, requiring players to participate in frequent bouts of high intensity activity (e.g. sprinting, physical collisions, and tackles), separated by short bouts of low intensity activity (e.g. walking and jogging) (Shephard, 1999; Reilly, Bangsbo & Franks, 2012; Bunc & Psotta 2011; Reilly & Gilbourne 2013; Gil et al., 2007).

There are many factors important in determining the success of a soccer player. Soccer players have to adapt to the physical and physiological demands of the soccer game. Players may not need to have an extraordinary capacity within any of the areas of physical performance but must possess a reasonably high level within all areas. Some of these physical and physiological factors are easily measurable such as running speed and jump capacities (Reilly, Bangsbo & Franks, 2012; Gil et al., 2007).

In addition, the one of the most discriminating factors among elite and non-elite soccer players were sprint time (Reilly & Williams, 2009). The assessment of the physical capacities of players is widely utilized in an attempt to gain an understanding of the player's performance capabilities (Swensson & Drust,2015).

Physiological considerations are increasingly essential to optimal performance, not only in adults, but also in young children. Nowadays, the early participation of children involves intensive training and participation in sport (Diallo, 2011).

Although its popularity compared with other sports at each age level, there is a scarcity of information on the technical, physiologi-

cal and conditioning aspects of pre-pubescent players. The information available for players is much less than that for adults. To date, there were limited study has investigated the physical and physiological characteristics of very young soccer players (Gil, Ruiz at al., 2007; Drust,2007).

### **The purpose of the study:**

To explore the main medical-sport data for the selection of national team players U 17.

### **Method**

In this research are included 35 players who did not pass the age of 17 years. Scientific study controls were carried out in a sports lab certified in March 2018 at the National Sports Center.

Players passed medical examination, according to a protocol ordinary sports medicine, being asked to illness, injury and other problems. Each player made the clinical analysis of complete blood and urine. For the study effect we have only evaluated some data: hemoglobin gr. / dl, age with calendar date, height in cm, weight in kg, fat content measured with Harpner compass and aerobic strength according to Astrand. Aerobic power is evaluated by indirect testing in absolute and relative values. All variables have been valid for judging how the players have been selected from the constitutional and functional side.

The Statistical analysis was done using software, IBM SPSS 20. Statistical techniques used include: general descriptive analysis, assessment of the data distribution and control of search hypotheses through the comparison of the difference techniques.

## **Results**

**Table 1.** Age and height data for tested players

Age	density	%	Height	density	%
15	3	8,7%	161,5-169,5	4	11,4%
15,5	7	20%	171-174,5	13	37,2%
16	24	68,4%	175-179	11	31,4%
16,5	1	2,9%	180,5-186,5	7	20,0%
Amount	35	100%	Amount	35	100%

**Table 2.** Weight and fat % data for tested players

Weight	density	%	% fat	density	%
53-60	10	28.6%	7-10 %	30	85.7%
61-69	17	48.5%	10.5-12%	5	14.3%
70-78	8	22.9%			

**Table 3.** Relative aerobic power and absolute aerobic power data for tested players

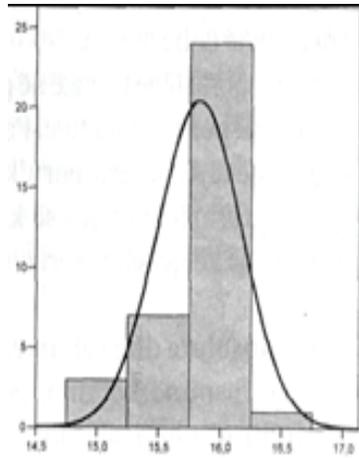
Relative aerobic power	density	%	Absolute aerobic power	density	%
30,4-39,3	20	57.1%	2,0-2,5	16	45.7%
40,6-54,6	15	42.9%	2,6-3,5	19	54.3%

**Table 4.** Hemoglobin data for tested players

Hemoglobin	density	%
11-12	21	60%
12,4-13,8	13	37%
14,7	1	3%

## **Discussion**

In evaluating the parameters taken in the study, we considered the relationship between them and the effectiveness that they have in relation to the goal we have set ourselves in selecting the element for international activities. Age as a necessary obligation requirement, it is important to be calendar and unchanged for sporting purposes.



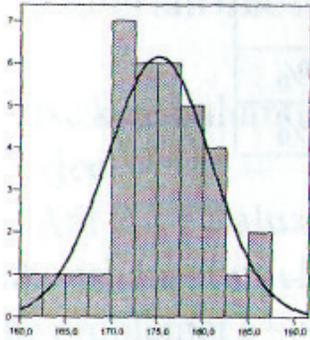
Graph. 1 Age

According to the values it appears that age is one of the data taken into account for the better. The selected footballers are at the age of  $15,828 \pm 0,3418$  who are able to play not only this season (see graph. 1).

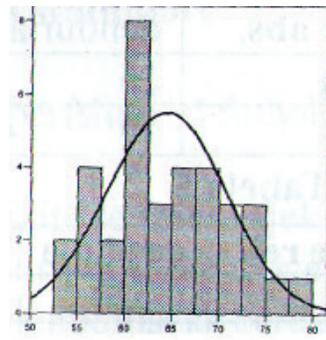
In 2017 according to studies (Ostreni,2017) the national football team average height was  $180.11 \pm 3.89$  and for youngsters U 19 was  $175.93 \pm 5.04$ . In this research the height is  $175,129 \pm 5,679$  9 which indicates that the demand for height players continues to be still today.

Weight, mass index and fat percentage show that players are in regular football body composition. Recently, data from the reflection as well as the national teams of Super League teams in Albania has been observed that already being fought to preserve their physical parameters. The footballers have the cheek to be more careful in weight conservation. At the same time, this shows that sports medicine has played an important role in understanding this problem correctly. The selection of these variables analysis shows that we're standing in new requirements to adapt the direction and trend of elite football in the world (Kariqi,2005). Of course, the search for height sportsmen in general means more capacity and effective sports-related applications. Despite this, a team cannot dominate

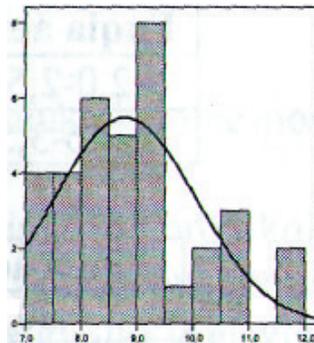
short stature but no team that has no such. Seeing this in the form of increasing the operational capacity, we say that selection has not only been favorable but also important (see graph. 2, 3, 4



Graph. 2 Height



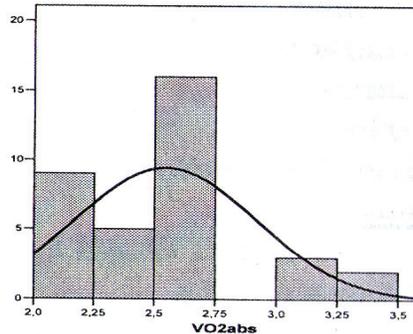
Graph. 3 Weight



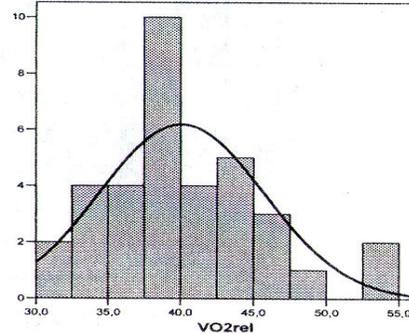
Graph. 4 Fat

In the age of the study, the absolute and relative aerobic power is found in low figures and this shows the wrong method of training the players for the problem in question. This is reinforced by the time of data collection that pertains to a period of activity. Absolute aerobic power  $2,546 \pm 0,370$  and relative  $40,054 \pm 5,644$  indicates that this physical fitness for age is reduced. With all the maximum growth opportunities, but no more than 25%, these players are not able to match the football game with the time requirements. This is

our early finding, not only with the teams but with the Loro Borici football national high school, where the results should be higher (Rusi,2013) (see graph. 5 and 6).

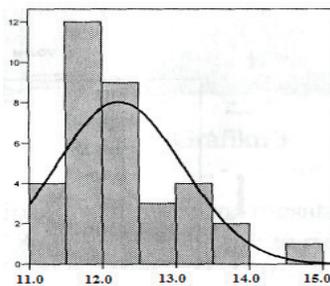


Graph. 5 Vo<sup>2</sup>abs.



Graph. 6 Vo<sup>2</sup>rel.

So if we have managed to find the type of the player constitutionally, we have not found the appropriate engines of this human machine. Looking at the data, we notice that 20 players have a value below 40 mlO<sup>2</sup>kg, which indicates that they are not able to play an intense game. Only 6 players reach their relative values from 45-55 mlO<sup>2</sup>kg min. This situation has to do with understanding not just the right of sports training but also the changing motive that each individual must have. Based on the data collected, the hemoglobin value in the player is below normal sports limits, and even only one player has 14.7 percent of the standard. The hemoglobin average in our values is  $12.23 \pm 0.869$  (see graph. 7).



Graph. 7 Hemoglobin

The assessment of health, blood and urine tests for four people with urinary tract infections indicates that football, especially those of the ages, is out of medical examinations. This is a task to find the way to the sport federations because the requirements of the federal statute, where participation may not be permitted without thorough analysis and necessary medico-sports.

### **Conclusions**

By anthropometric terms, players are well chosen and form the appropriate type for the soccer game. Height  $175,129 \pm 5,679$ , weight  $64, 43 \pm 6,326$ , % fat  $8,789 \pm 1,274$ .

The age of the players is appropriate for this activity. The young people selected, if they will continue, will have the chance to play with this age another year. This is very important in their activity.

One of the blood parameters, hemoglobin is at low levels, which significantly affects the aerobic ability of the athlete. 60% of the players have this value close to 12 gr / dl.

Aerobic power is below the sports level and under the civic level, 20 players are controversial for the football game.

The selection of high-level elite players needs a lot of specialists in different sports fields. In addition to the external constitutional appearance, the soccer should be evaluated in a functional way to avoid forgetting the psychological one. Creating the selection groups have importance first hand in achieving the goals. In the selection team the doctor is unquestionable after the physical and physical control of each sport individual.

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