

SHORT REPORT

Anthropometric Characteristics of Kosovo Superleague Footballers

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Abstract

The aimed of study is analyse the differences in some anthropometric characteristics and body composition between footballers of two clubs in Kosovo, FC Feronikeli and SC Gjilani. The first sample consisted of 21 footballers of FC Feronikeli (22.62 ± 3.46 years), current champion, cup and super cup winner in Kosovo at the time of the measurement in January 2020. The second sample consisted of 24 footballers of SC Gjilani (26.38 ± 5.62 years), who was the leader of the Superleague of Kosovo at the time of the measurement in February 2020. Anthropometric characteristics were evaluated with following variables: body height, body weight, triceps skinfold, biceps skinfold, skinfold of the back, abdominal skinfold, upper leg skinfold and lower leg skinfold. The body composition was evaluated with following variables: body mass index, fat percentage and muscle mass. The parameters of descriptive statistics all variables were calculated. The differences between the footballers of FC Feronikeli and SC Gjilani in the following variables were determined using a t-test. It was found that the footballers of the FC Feronikeli and SC Gjilani don't have statistically significant differences by the variables.

Keywords: *footballers, Kosovar superleague, anthropometric characteristics, body composition*

Introduction

Football is the most popular sport in the world (Masanovic, 2019). It belongs to the category of polystructural sports, with numerous cyclical and cyclical movements, with or without ball (Arifi, Bjelica, & Masanovic, 2019). In football, the best results can be scored only under conditions of well-programmed training process (Masanovic, T. Bavcevic, & I. Bavcevic, 2019). Various studies are confirmed significance of anthropometric characteristics and body composition of athletes for better quality of their game (Gardasevic, Bjelica, Bajramovic, Masanovic, & Popo, 2021). Many studies indicates that athletes of different sports have different anthropometric characteristics and body composition (Masanovic, Gardasevic, & Bjelica, 2021; Gusic, Popovic, Molnar, Masanovic, & Radakovic, 2017). Required level of anthropometric characteristics and body composition of footballers is very importance for that

sport. As in the Balkan, football is the number one sport in Kosovo. This research was conducted on the footballers of two successful clubs of the Superleague, the highest quality league in Kosovo.

The aimed of study is analyse the differences in some anthropometric characteristics and body composition between footballers of FC Feronikeli and SC Gjilani.

Methods

A sample of a total of 45 football players was included in this study. The first sample consisted of 21 footballers of FC Feronikeli (22.62 ± 3.46 years), current champion, cup and super cup winner in Kosovo at the time of the measurement in January 2020. The second sample consisted of 24 footballers of SC Gjilani (26.38 ± 5.62 years), who was the leader of the Superleague of Kosovo at the time of the measurement in



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February 2020. Football club Feronikeli was the champion of Kosovo three times. Six months before the measurement, FC Feronikeli won the third title, the Cup and Supercup of Kosovo, and competed in the qualifications for the UEFA Champions League in the 2019/20 season, entering at the preliminary round. Football Club Gjilani has never been the champion of Kosovo, but in the middle of the 2019/20 season, at the time of the measurement, it was leading in the table of the Kosovo Superleague and fought for the title of champion.

Anthropometric measurement has been carried in accordance with the International Biological Program guidelines. Anthropometric characteristics were evaluated with following variables: body height, body weight, triceps skinfold, biceps skinfold, skinfold of the back, abdominal skinfold, upper leg skinfold and lower leg skinfold. The body composition was

evaluated with following variables: body mass index, fat percentage, and muscle mass. An anthropometer and calliper were used for anthropometric measurement. The Tanita MC 980 model was used to assess body composition.

The differences between the footballers of FC Feronikeli and SC Gjilani in the following variables were determined using a t-test, with statistical significance of $p < 0.05$.

Results

Before t-test the standard central and dispersion parameters and skewness and kurtosis of all variables of footballers of both clubs were calculated. The results showed the normal distribution. T-test results (Table 1) showed that the footballers of FC Feronikeli and SC Gjilani didn't have statistically significant differences by the variables.

Table 1. T-test results of the footballers of FC Feronikeli (N=21) and SC Gjilani (N=24)

Variables	Club	Mean±S.D.	Mean Difference	t-test	Sig.
body height	FC Feronikeli	180.16±6.57	1.15	.600	.552
	SC Gjilani	179.01±6.31			
body weight	FC Feronikeli	76.51±6.08	-.62	-.369	.714
	SC Gjilani	77.13±5.19			
triceps skinfold	FC Feronikeli	6.50±2.77	.30	.437	.664
	SC Gjilani	6.20±1.62			
biceps skinfold	FC Feronikeli	5.18±2.63	.52	.680	.500
	SC Gjilani	4.66±2.43			
skinfold of the back	FC Feronikeli	9.35±1.94	-.03	-.046	.964
	SC Gjilani	9.38±2.59			
abdominal skinfold	FC Feronikeli	11.28±3.41	.03	.022	.983
	SC Gjilani	11.25±3.34			
upper leg skinfold	FC Feronikeli	9.01±2.70	-.60	-.795	.431
	SC Gjilani	9.61±2.35			
lower leg skinfold	FC Feronikeli	4.64±1.22	-.39	-.958	.343
	SC Gjilani	5.03±1.47			
body mass index	FC Feronikeli	23.56±1.39	-.54	-1.418	.163
	SC Gjilani	24.10±1.15			
fat percentage	FC Feronikeli	11.90±3.27	-.38	-.416	.679
	SC Gjilani	12.28±2.84			
muscle mass	FC Feronikeli	39.07±4.95	.79	.689	.495
	SC Gjilani	38.28±2.59			

Discussion

It can be concluded that the footballers of FC Feronikeli and SC Gjilani had similar mean values of the variables analysed. These results were expected if we look at their results in Superleague of Kosovo over the last six months. Similar results were found on a footballers from the best clubs of Montenegro (Gardasevic, Bjelica, & Vasiljevic, 2019) and Bosnia and Herzegovina (Gardasevic et al., 2020). It can be noticed very similar mean values of anthropometric characteristics and body composition of top footballers from the region (Gardasevic, & Bjelica, 2020; Gardasevic, Bjelica, Vasiljevic, Arifi, & Sermaxhaj, 2019). In this research the t-test results didn't show a statistically significant difference

between variables. Some values of variables are higher for footballers of FC Feronikeli and some for footballers of SC Gjilani, but, didn't find significant differences. First of all the results of this research can be significant for coaches of both clubs. These variables can be improved with good training and right nutrition. However, it can be concluded that all tested footballers have average values of parameters that are in very good for professional footballers. It means that their coaches are doing a good job. This is just one segment of testing needed to check the complete status of the footballers. Motorical, functional, psychological and tactical status and analyse should be included and check if there is space for their improvement.

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Conflict of Interest

The authors declare that there are no conflicts of interest.

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