

## *The impact of motor skills on the success of the football players aged 14-16 in the region of Gjilan*

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### **Abstract**

Research on the Impact and Relationships between basic - motor and situational - motor skills is a continuous process that highlights the impact of basic - motor skills on the situational - motor tests of the football players of Gjilan region, who are an integral part of the elite football in Kosovo. The main purpose of this paper is to determine the impact of performance motor skills in the analysis of two situational motor tests of cadet football players. In the sample of the research are included 98 football players of the Gjilan region, from the cadets' category, who will also be representatives of the future of Kosovar football and wider. In this paper, the impact of some dimensions on the motor space was examined by: (explosive force, the frequency of arms and feet speed, coordination and flexibility) with a total of 12 variables and two situational motor tests (the speed of playing with the ball on the straight line and heading the ball). The method used in this paper is regressive analysis, processed through the SPSS statistical package.

After processing the results, we notice that in the results of the situational coordination tests, significant impact have shown the following variables; step running sideways and sprint, as well as

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in the situational - motor test (the impact of heading the ball), an important impact has shown also step running sideways, running in the rectangle (envelope test), standing long jump and triple jump.

**Keywords:** *Footballer, motor skills, coordination, kicking, regression.*

## ***Introduction***

Football is undoubtedly the most beloved sport for children and adults, at the same time the most popular sport on the planet. Thus, we can say that it is a planetary game that is played on six continents and is being watched by over three billion people and as such takes the first place in the sports games. The football game is always on the rise from all dimensions, such as quality, attractiveness, finances, and active participation from all over the world. Kosovo has also been incorporated into the world's most popular homes in UEFA and FIFA in 2016, and now our players have open doors to show their qualities alongside the well-known players. I am proud to mention the names like Shaqiri, Xhaka, Xhemajli, Cana, Behrami, Rashica and many others that today are a motivating factor for new players who are exercising and can follow their footsteps. Contemporary football requires a high level of tactical/technical preparations, and in particular basic motor skills such as speed, explosive force, flexibility, coordination, balance, and sustainability are key indicators in realizing the situational tasks in the football game. Determining the dimensions that define the relationship between basic - motor and situational - motor variables as well as the impact on cadets' success is very complex and multidimensional problem.

Modern football streams have necessarily imposed a scientific approach and new approach to this sports discipline. Of course, such a report based on the professional, scientific aspect of football enables further development and progress and

contributes to its even greater popularity within sports in general. Serious analysis of modern football development, depicted with a prognosis reference and hypothetical meaning for the future of football development, implies a serious analysis of football history. Only the historical facts of football development make it possible to look at the streams of modern football and the professional observation of football development in the future. Similar works in the field of football have been made by many authors, I will mention as follows (Gabrijelić 1982, 1983)<sup>1</sup>, has researched situational motor relations and evaluated the success of the football players, and has used methods for selection and orientation of children and youth for sports schools<sup>2</sup>. Mehmeti, with collaborators, (2010), in his 88-page Bundesliga research, the German league has proven the impact of basic motor skills in ball handling and precision<sup>3</sup>. Mekić Midhat (1985), in his study he explored morphological, conative and basic motor skills in situational motor tests.<sup>4</sup> Through this paper, we will try to confirm the impact of some basic motor skills on the predictive side and the success in realizing situational - motor tests on the criterion side of the football players of the Gjilan region who are active in the clubs and compete in the regional league of Gjilan. Starting from the fact that football as the most popular sport in the world has been the curiosity and interest in getting into the football game, as a

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<sup>1</sup> Milivoje Gabrijelić Jerković Stjepan, etj Aubreht, Relacije situaciono – motoričkih faktora i ocjena uspjeha nogometaša, *Kineziologija*, Zagreb, Vol. XV, Br. 2: 1983. (53-63).

<sup>2</sup> Milivoje Gabrijelić, Stjepan Jerković etj., Analiza pouzdanosti i valjanosti situacijsko-motoričkih testova u nogometu. *Kineziologija*, 14-15 Zagreb: 1982. (149- 161).

<sup>3</sup> Ejup Mehmeti, etj. Utjecaj bazično motoričkih sposobnosti na brzinu vođenje lopte i preciznosti u nogometnoj igri njemačkih nogometaša - kadeta uzrasta 12-14 godina. *Časopis za sport, fizičko vaspitanje i zdravlje, Sport Mont*, broj 21-22. /VII. Podgorica: 2010. (84-90).

<sup>4</sup> Midhat Mekić, Kanonička relacija između morfoloških, motoričkih i konativnih karakteristika i rezultata situacijsko – motoričkim testovima u nogometu. Zbornik del, šesta letna škola“ Kranska Gora“.1985 (209 – 221).

consequence of this is a trend of football school growth and the incorporation of young people into the respective schools. Ten schools of football in the Gjilan region are competing, including clubs with new categories. Such research related to the performance of young players are rare, so I tried to make a modest contribution to the research problem.

## ***Methodology***

In this survey were taken samples of 100 football players, aged 14-16 from the Gjilan region, FC Gjilani, FC Drita, FC Shkendija, FC Gallaksia, FC Vitia with 20 players. During the basic motor measures two players were missing due to health reasons, 98 football players were subjected to testing at 10:00hrs in the gym of “Marin Barleti” in Gjilan, starting from 20 up to 25 April 2015, every day with a team of 20 players, whereas the motor situational tests at the city stadium from 13:00hrs.

***A sample of variables*** - In this paper 12 variables in the manifest space of the basic motor and two situational motor variables were treated which were taken by Kurelić and collaborators (1975) according to Sylejmani (2014).

### ***Basic motor variables***

In the manifest space are treated with four tests belonging to the space of the explosive force, the structure of the frequency and the coordination space:

#### ***Variables for assessment of explosive force***

1. MKVGJA – Standing long jump,
2. MKVLAR – Standing high jump,
3. MKTREH – Standing triple jump,
4. MVR20M –20 meters running from standing start,

#### ***Variables for the assessment of speed frequency***

1. MTAPKË – Taping with leg,
2. MTAPKM – Taping with leg on wall,

3. MRRRDO – Circle of the hand around the drum,
4. MRRRKË – Circle of the leg,

***Variables for assessment of coordination and flexibility***

1. MUTSLL – Handling the ball –slalom,
2. MKHANS – Running sideways,
3. MKVZAR – Running in rectangle (envelope) and
4. MFPTAV – Bending forward on the table

***Situational - motor variables***

1. MSSHUNK – The speed of handling the ball in direct line with the change of direction
2. MSGTKO – Hitting the ball with the head.

***Discussion of results***

The results are processed through statistical SPSS version 19, by analyzing the regression method, at both situational motor tests as criterion variables and variables of basic -motor skills in the predictor system in the motor manifest space.

Based on the purpose of this paper, regression analysis has been applied to show the impact of the criterion variables on the football players in the Gjilan region; we can also predict the efficiency of the extent to which the critical variables of the situational-motor dimensions can be influenced by basic - motor skills. Multiple correlations, (R) which shows the correlation value between all predictor variables and that criterion. The coefficient of determination (Adjusted R Square), which shows the percentage of common variable between predictive and criterion variables (df1 and df2), that explain the degrees of freedom. Validation (Sig F change), which shows the statistical validity at the level of reliability .01. Also, the partial coefficient values (Beta) and partial correlation (Part) represent the partial correlation between predictive variables and criterion variables, as well as the determination of the partial influence of the

predicted variables in the criterion, after eliminating the impact of all other variables.

**Table 1.** Regression analysis of speed in handling the ball with shift of direction at right angle

Model	multiple correlation	R Percentage	Determination coefficient	Standard error of assessment	Statistical changes				
					R Square change	F	df 1	df 2	Sig. F Change
1	.635 <sup>a</sup>	.404	.319	.51471	.404	4.794	12	85	.000

a. Predictors: (constant), MFPTAV, MVR20, MKHANS, MRRRDO, MKVZAR, MTAPKM, MKTREH, MTAPKË, MUTSL, MRRRKË, MKVGJA, MKVLAR

**ANOVA<sup>a</sup>**

Model		The amount in square	Df (degrees of freedom)	The arithmetic square	F	value.
1	Regression	15.242	12	1.270	4.794	.000 <sup>b</sup>
	Remains	22.518	85	.265		
	Total	37.760	97			

a. Critical Variable: MSSHUNK

**Coefficient**

Model		Equal coefficients		Standardized coefficient	T	Value
		B	Mistakes during measurement	Beta		
1	(Constant)	1.140	3.385		.337	.737
	MKVGJA	.001	.005	.014	.127	.900
	MKVLAR	.028	.017	.206	1.603	.113
	MKTREH	-.002	.002	-.128	-.993	.323
	MVR20M	-.440	.326	-.131	1.349	.181
	MTAPKË	-.067	.032	-.206	2.079	<b>.041</b>
	MTAPKM	.038	.021	.194	1.820	<b>.072</b>
	MRrDO	.007	.016	.040	.411	.682
	MRrKË	.002	.027	.008	.073	.942
	MUTSLL	.147	.053	.285	2.779	<b>.007</b>
	MKHANS	.604	.142	.440	4.249	<b>.000</b>
	MKVZAR	.104	.070	.142	1.484	.141
	MFPTAV	.005	.014	.038	.374	.710

a. Critical Variable: MSSHUNK

**Table 1.** Regression analysis of speed in handling the ball with shift of direction at right angle

Model	R multiple correlations	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.635 <sup>a</sup>	.404	.319	.51471	.404	4.794	12	85	.000

a. Predictors: (Constant), MFPTAV, MVR20M, MKHANS, MRRRDO, MKVZAR, MTAPKM, MKTREH, MTAPKË, MUTSLL, MRRRKË, MKVGJA, MKVLAR

**ANOVA<sup>a</sup>**

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	15.242	12	1.270	4.794	.000 <sup>b</sup>
	Residual	22.518	85	.265		
	Total	37.760	97			

a. Dependent Variable: MSSHUNK

**Coefficients**

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.140	3.385		.337	.737
	MKVGJA	.001	.005	.014	.127	.900
	MKVLAR	.028	.017	.206	1.603	.113
	MKTREH	-.002	.002	-.128	-.993	.323
	MVR20M	-.440	.326	-.131	-1.349	.181
	MTAPKË	-.067	.032	-.206	-2.079	<b>.041</b>
	MTAPKM	.038	.021	.194	1.820	<b>.072</b>
	MRrRDO	.007	.016	.040	.411	.682
	MRrRKË	.002	.027	.008	.073	.942
	MUTSLL	.147	.053	.285	2.779	<b>.007</b>
	MKHANS	.604	.142	.440	4.249	<b>.000</b>
	MKVZAR	.104	.070	.142	1.484	.141
	MFPTAV	.005	.014	.038	.374	.710

a. Dependent Variable: MSSHUNK

Table 1 shows the values of the basic motor - tests of the football players in the predictive system and through the regression analysis in the relation of the criterion variable MSSHUNK - The speed of the ball handling with the change of direction in a straight line from the high position gives us significant valuable results ( $R_o = 635$ ), it can be explained by 40.4% of the common variability of the predictive system and the criterion variable, the rest of 59.6% is under the influence of unknown and unrelated factors included in this paper. Based on the values obtained from twelve (12) variables of basic - motor skills, from which the best results have been shown by the tests from test system of coordination such as: MKHANS - running sideways with Sig.

000, then MUTSLL test - Slide ball control at level .007, As well as partial impact tests belonging to the speed frequency variable system such as MTAPKË – handling the ball in level (.041) and MTAPKM variable - foot tapping on the wall in value (.072), we can conclude that the football game is complex with unexpected actions during the game in space and time that are manifested in the game by dribble, trick or kick to reach the goal, (goal scoring). Thus, for example, the technical preparation of players depends largely on the degree of motor and functional skills.

**Table 2.** Regressive analysis of heading the ball

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.606 <sup>a</sup>	.368	.278	1.04726	.368	4.116	12	85	.000

a. Predictors: (Constant), MFPTAV, MVR20M, MKHANS, MRrRDO, MKVZAR, MTAPKM, MKTREH, MTAPKË, MKSLLA, MRrRKË, MKVGJA, MKVLAR

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	54.175	12	4.515	4.116	.000 <sup>b</sup>
	Residual	93.225	85	1.097		
	Total	147.400	97			

a. Dependent Variable: MSGTKO

b. Predictors: (Constant), MFPTAV, MVR20M, MKHANS, MRrRDO, MKVZAR, MTAPKM, MKTREH, MTAPKM, MUTSLL, MRrRKË, MKVGJA, MKVLAR

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	26.367	6.888		3.828	.000
	MKVGJA	.008	.011	.084	.720	.474
	MKVLAR	-.073	.035	-.272	-2.060	<b>.042</b>
	MKTREH	.009	.005	.253	1.902	<b>.061</b>
	MVR20M	.295	.664	.044	.444	.658
	MTAPKĚ	-.018	.066	-.029	-.281	.780
	MTAPKM	-.001	.042	-.003	-.027	.978
	MRrRDO	.043	.033	.130	1.295	.199
	MRrRKĚ	.006	.055	.011	.103	.918
	MUTSLL	-.061	.108	-.060	-.566	.573
	MKHANS	-1.099	.289	-.405	-3.798	<b>.000</b>
	MKVZAR	-.359	.143	-.247	-2.513	<b>.014</b>
	MFPTAV	.017	.029	.060	.582	.562

In table 2 are presented basic –motor values of the football players in the predictive system and through the regressive analysis of the MSGTKO criterion tests.- Kicking off the ball with the head, from a high position, gives us a significant results .000, based on the coefficient of the multiple correlations ( $R_o = 606$ ) can be explained 36.8% of the common variability of the predictive system and the criterion variable. The rest of 63.2% is under the influence of unknown factors and not included in this paper. Based on the obtained values it has been proved that the MKHANS variable – running sideways, of the predictive system has a statistically significant impact on the MSGTKO variable value (000), and the variable MKVZAR - running in rectangle (envelope) statistically significant in the criterion of the value criterion (sig 014), also the partial impact have variables from the MKVLAR explosive force test system - with value (sig.0.42) and

the variable MKTREH – standing triple jump, with value (0.61) that gives the impression that the explosive force and coordination is the basis for the realization of the motor situational tasks. With the inspection of the results, it is noticed that impact in the realization of the motor situational task has tests that belong to the hypothetical motor space: coordination, explosive force and that have to do with the perception of space, time and moment of the most successful kick.

### ***Conclusion***

Based on the intentions and importance of this paper has been the recognition and impact of basic motor skills in the realization of motor situational tests, after processing, interpretation and analysis of results, we can conclude that the purpose set out at the beginning of the paper showing that the results of aged 14-16 players showed good statistical results and we can conclude that a statistically valid conclusion has been reached.

The sample included 98 players from five clubs in Gjilan region who were subjected to twelve (12) basic-motor skills tests in the predictive system in the manifest space and two situational motor tests in the criterion system which have been carried out a total of 1372 measurements, of which explosive force tests, the frequency of speed and coordination have resulted significant. (.000) based on two situational motor tests give us a real view of skills from basic motor skills of football players in the region of Gjilan for the realization of the basic-motor tasks in the football game. We can freely say that the result indicators achieved in the situational motor tests highlight two main conclusions:

The results of the basic motor tests have an impact on the value ( $p = .01$ ) at the level of the results obtained in the situational motor tests and

In achieving the results of the situational motor much more impact have the indicators of the basic motor that are under the

influence of the energy regulation system rather than the physical capabilities that are under the influence of the motion control system.

This paper is a guide for trainers, pedagogues of physical education, who are directly connected to new generations and are an integral part of the training process for the purpose of professional upgrading in the football game.

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