

INFLUENCE OF CORELATIONS IN SOME MORPHOLOGICAL VARIABLES AND BASIC AND SPECIFIC MOVABLE OF YOUNG BASKETBALL PLAYERS

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Abstract

In this study were treated data of 35 male basketball players aged 13-14 years from basketball school in the municipality of Prishtina. There were used application of eight variables of morphological field, while in the basic and specific movable variables were used seven variables, through regression analysis which are extracted in two important tests as an important criterion for the game of basketball. Also there were presented valuable coherence between morphological variables and movable basic and specific tests. Previous hypotheses are realized as a whole, while the obtained results are entirely valid, considering the age of these basketball players.

Key words: *young basketball players, testing tools, sports equipment, morphological variables, basic and specific movable variables, regression analysis.*

Introduction

Basketball as a sport itself contains a vast of interesting situations, even attractions in specific moments. As a game it is characterized with poly-structural and complex movements, cyclic and acyclic movements correlated to the physical level of preparation. Basketball players' movements must be quick and well-coordinated, one of the characteristics of this beautiful game that should be mentioned, are the quick moves that are executed in different directions, then unexpected shots from different positions, assisting and also perceptions that happen within the game.

Research in basketball gives us information which undoubtedly testifies the existence and the influence of many factors in executing these complex motoric movements. Research study: The goal of this study is that through regression analysis to present some tests as a criterion, and also the valuable correlation between morphological variables and basic specific movement at the young players aged 13-14. Main goal: Valuable correlations between morphological variables and the basic specific movement, and the presenting of the criterion tests through the use of regression analysis. Hypotheses: In this research study we have two hypotheses: 1) We hope that important correlations will be proven in the aspect of morphological and basic specific movements in young basketball players in the age of 13-14. 2) We hope that by using regression analysis, valuable criterion tests will be presented.

Methods

Sample of entities

Study-experimentation includes the number of 35 basketball players aged 13-14, of male gender, who deal with basketball, exercise three times a week at the basketball school in the city of Prishtina. The tests were conducted in sports gyms

in the city of Prishtina. Measurements-tests were conducted during April '18. Experimental study includes the number of 7 variables from basic specific movement aspect, and 8 morphological variables.

Morphological tests

- Body weight - kg
- Body height - cm
- Arm length - cm
- Legs length - cm
- Palm length - cm
- Palm width - cm
- Foot length - cm
- Foot width - cm

Basic movement variables

- Long-jump - cm
- Countermovement Jump - cm
- 20 m sprint - s
- Medicine-ball throw - cm

Specific movement variables

- Dribbling around the cones- s
- Five different positions jump shots- s
- Lateral jump over the ball - s

From this table we can tell that most of the variables have a valuable correlation, especially (P.Width) which has correlation with most of the other variables. Meanwhile, weight, arm length and foot width have no valuable correlation with any of the variables.

From this table we notice that the movement variables have no valuable correlation. What's worth mentioning here is that the tests; (Countermovement Jump and long jump) have valuable correlation, as well as (Countermovement Jump and 20m sprint) have correlation. Also, (Countermovement Jump) has correlation with

(Dribbling around the cones), whilst the latter one has a valuable correlation with (lateral jump over the ball) test. From table no. 2 it is made clear that all variables have correlation between them, especially (medicine ball throw) with (20m sprint) and the test (5 different positions jump shots) where we can notice a low correlation. From the tables we can tell that the correlations are valuable,

considering the training of these young players, which results with a homogeneous entity in these variables. Regression analysis. Regression analysis of the relevant sport activity, concretely of dribbling through the cones as (Dribbling around the cones) variable and the variable of (Countermovement Jump) as a dependent variable or as a criterion.

Table 1. Morphological variables correlation.

		Height	Weight	A.Length	L.Length	F.length	F.width	P.Length	P.Width
Height	Pearson Corr	1.000							
	Sig.								
Weight	Pearson Corr	-.183	1.000						
	Sig.	.333							
A.Length	Pearson Corr	.206	.189	1.000					
	Sig.	.274	.316						
L.Length	Pearson Corr	.444*	.002	.748**	1.000				
	Sig.	.014	.992	.000					
F.Length	Pearson Corr	.144	.227	.627**	.434*	1.000			
	Sig.	.449	.227	.000	.017				
F.Width	Pearson Corr	-.100	.281	.129	.113	.116	1.000		
	Sig.	.599	.132	.497	.552	.541			
P.Length	Pearson Corr	.205	.244	.787**	.460*	.771**	.148	1.000	
	Sig.	.277	.194	.000	.010	.000	.436		
P.Width	Pearson Corr	-.016	.322	.435*	.256	.500**	.463*	.478**	1.000
	Sig.	.932	.083	.016	.173	.005	.010	.008	
**	Sign. 0.01								
*	Sign.0.05								

Table 2. Basic specific movements' variables correlations.

Test		LJUMP	CMJ	20MS	MEDTH	LAJOB	DRACO	5JSHT
LJUMP	Pearson Corr	1.000						
	Sig.							
CMJ	Pearson Corr	.630**	1.000					
	Sig.	.000						
20MS	Pearson Corr	-.597**	-.246	1.000				
	Sig.	.000	.191					
MEDTH	Pearson Corr	-.146	-.035	-.011	1.000			
	Sig.	.442	.856	.953				
LAJOB	Pearson Corr	.210	.337	-.289	.164	1.000		
	Sig.	.265	.068	.122	.387			
DRACO	Pearson Corr	-.069	-.538**	.020	.121	-.440*	1.000	
	Sig.	.717	.002	.918	.523	.015		
5JSHT	Pearson Corr	-.274	.085	.310	.002	-.015	-.206	1.000
	Sig.	.143	.655	.095	.991	.936	.274	
**	Sign. 0.01							
*	Sign.0.05							

Table 3. ANOVA

ANOVA						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1018.026	1	1018.026	11.398	.002b
	Residual	2500.774	28	89.313		
	Total	3518.800	29			
a. Dependent Variable: Countermovement Jump						
b. Predictors: (Constant), Dribbling around the cones						

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	119.227	24.180		4.931	.000
	Dacone	-3.823	1.132	-.538	-3.376	.002
a. Dependent Variable: Countermovement Jump						

From these tables we notice that the relevant sport activity, respectively basketball test; dribbling through the cones, has given an important influence in basic movement factors, more

concretely in the test (Countermovement Jump), the trends of influence have been positive, which means the faster the dribble the higher the result of jumping.

Table 4. Regression of dribbling through the cones test.

Model	R	R Square	Adjusted R Square	F Change	df1	df2	Sig. F
				1	.483a	.233	.113
ANOVA ^b							
Model		Sum of Squares	Df	Mean	F	Sig.	
1	Regress	51.754	8	6.469	1.939	.074a	
	Residual	170.132	51	3.336			
	Total	221.886	59				
		Koef.i			Korelacioni		
		Beta	T	Sig.	Zero-order	Partial	
1	B.Weight	-.304	-1.925	.060	-.253	-.260	
	B. Height	.015	.097	.923	.170	.014	
	A. Length	-.040	-.217	.829	-.148	-.030	
	Le. Length	.030	.190	.850	-.067	.027	
	P.Length	.036	.175	.862	-.102	.025	
	P.Width	.432	2.743	.008	.353	.359	
	F. Length	-.060	-.314	.755	-.188	-.044	
	F.Width	-.113	-.687	.495	.087	-.096	

Different from (lateral jump over the ball), regression analysis of (dribbling around the cone) has given a valuable significance only in the (foot width) variable, with positive trends, which means the higher the foot width, the better the dribbling execution through the cones.

Analysis and verification of hypotheses

Hypotheses have been totally realized. In this experiment study, young basketball players follow training sessions organized by the basketball academies in the city of Prishtina. So their skills differ in the game of basketball. From these results, we can state that the hypotheses have been verified, always bearing in mind that they are active in the sport of basketball.

Conclusion

In this experiment study 35 entities have been treated, young players aged 13-14 of male gender, who practice the sport of basketball in the city of Prishtina. The basic specific movement aspect has been treated with 7 variables, whilst the morphological aspect has been treated with 8 tests. By regression analysis, two tests have been extracted as a criterion, important for the game of

basketball; also, valuable correlations have been shown between morphological and basic specific movement tests, at these young basketball players.

Based on the resulting data, these young basketball players have shown good skills because they play the sport of basketball. In general they have shown valuable importance in the following tests; (Long Jump, Countermovement jump and 20m Sprint), whilst the specific variables are: dribbling through the cones and jump shots from 5 different positions, which show the precision in basketball.

As for the age we have got enough potential of our youngsters, but comparing the number of them, it becomes that only a few of them practice the game of basketball.

Therefore, we need to offer them better working out conditions, such as a better infrastructure, and to add more commitment to them because they are our future, which can follow the contemporary development trends in the sport of basketball.

So based on the results won, we can say that nothing is definite, because these young basketball players are still in puberty.

References

- Arben, J. (2005). Theory and methodology of sports training. *Tirana, 1*, 177-250,
- Carter, L. (2006). *Somatotyping. Anthropometrica*.
- Erculj, F. (2010). Morfoloske značilnosti kosarkaric, starih 14 in 15 let, ki nastopajo v skupinah A in B Evropskega prvenstva. [Morphological characteristics of basketball players aged 14 and 15, taking part in Group A and B European Championships. In Slovene.]. *Revija Sport, 1-2*.
- Salihu, H. (2009). Odredba nekih posebnih karakteristik bazičnih i situacionih testova u motoričkom prostoru kod mladih košarkaša. [The order of some special characteristics of basic and situational tests in the motor space with young basketball players. In Bosnian.]. University of Tuzla.
- Salihu, H. (2009). The influence of some morphological, motile, basic and situated features, and connection among them concerning young basketball players. 13th symposium for Physical Education in young people.
- Salihu, H. (2012). The impact of the teaching process on students considering some movement variables. *Acta Kinesiologica, 6(2)*.
- LaMonte, M.J., McKinney, J.T., Quinn, S.M., et al. (1999). Comparison of Physical and Physiological Variables for Female College Basketball Players. *Journal of Strength and Conditioning Research, 13(3)*, 264-270.
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