DIFFERENCES IN SOME MOTOR SKILLS OF BASKETBALL POSITIONS ACCORDING TO TO 16 YEAR OLDS

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Abstract
The paper aims at presenting some differences in motor skill positions according to basketball players aged 16 years. Samples of the paper is composed of 59 basketball players aged 16 years. They are divided into five groups according to their positions on the playing field: Organizer of the game (16), Shooting guard (13), Small forward (14), Power forward (9) and Center (7). Small forward has shown that there is greater value dominant group of players by position players test the jump from place to length with a value of 204.07 ± 20.51 cm and abdominal muscles test worth 23.42 ± 30 sec. Players of the center have shown that the jump from place to height value of 40.71 ± 8.63 and the wing bending test (pumps) worth of 23.14±6.91 for 30 sec. As the organizer of the game, shooting guard and power forward did not show the dominant values of the group of players by positions, whereas the value of good results under these positions basketball game. For differences between the positions of the players is applied univariante analysis of variance (ANOVA). Test jump from place to length has significant value of .099, while running (sprint) test of 20 meters has significant value of .023. Test abdominal muscles and bending the wings (pumps) have shown significant value between players at positions of .062 and .010, while the jumping from place to height did not show meaningful value. Based on the results concluded that the organizer of the game, shooting guard and center performers showed the dominant values and significant differences are shown to tests which are an indicator of the strength explosive, speed and strength repeating (iterative).

Keywords:*positions, basketball, differences, ANOVA, motor skills*

Introduction

Basketball players can be categorized according to their positions as is : Organizer of the game -PG, Shooting guard-SG, Small forward-SF, Power forward -PF and Center - C, however the game of basketball these are traditional positions within the team. Basketball players during their game usually have specific skills for positions that are displayed in the field of play, because the position of a player focuses on specific motor skills. (Reif-Wenner M. S. 2010; Kryeziu, A. 2015).

Explosive strength, vertical jump, speed and skill agility are those which contribute to the effectiveness of efficient movement with and without the ball, these skills affect the proper execution of the technical and tactical elements and game performance on position players (Dežman, B. 1990; Jakše et al., 2006; Erčulj et al., 2007; Erčulj, F. 2007; Abdelkrim et al.,2011;Kryeziu, A. 2015).

In this paper for the experiment is the appearance of differences and analysis of the positions of the players based on motor skills, because each player who covers his area of the field of play has a duty to show and game shows during their motor performance. Therefore research on position players the game is handling the problem space with what we have as objective motor skills to basketball. The purpose of this paper is to identify possible differences in some motor skill positions according to basketball players aged 16 years.

Method

Sample (model) of subjects
In 59 samples are including basketball players aged 16 years and above who are divided into five groups according to their positions on the playing field: Organizer of the game (16), Shooting guard (13), Small forward (14), Power forward (9) and Center (7).The testuari, some schools are members of the basketball, Drita from Gjilan and Sigal Prishtina from Pristina, the youth are involved in the basketball training program, approximately 2 years, have used 3 times a week as well as 1 hour and 15 minutes a day.

Motor test samples
For this paper are applied to five (5) motor tests which are valued according to the positions of basketball players.The jump from place to length - JPL; The jump from place to height - JPH; Running(sprint)20 meters - S20m; Abdominal muscles - AM; Bending the wings (pumps) - BW. Measuring instruments are applied by: (Dizdar el al., 1996;Klemenčič, J.2010). Data were processed with statistical computer program SPSS version 11 for Windows for basic research of statistical indicators on position in motor space statistical methods are applied: Arithmetic average (Mean) and Standard Deviation (Std. Dev.). To prove the differences between the positions of the players is applied univariante analysis of variance (ANOVA).

Results and discussion

According to the results of basic statistical indicators, statistical methods are applied arithmetic mean (Mean) and standard deviation (Std. Dev.). Small forward has shown that there is greater value dominant group of players, according to the positions of players in test jump from place to length with a value of 204.07 ± 20.51cm and abdominal muscles to test the value of 23.42 ± 3.54 for 30 seconds. Players of the center have shown that the jump from place to height value of 40.71 ± 8.63 and the wing bending test (pumps) with a value of23.14± 6.91 for 30 seconds.While the organizer of the game, shooting guard and power forward have not shown the dominant values of the group of players by positions, but have shown good value outcomes under these positions basketball game.

Table no. 1 Basic statistical indicators according to the position in motor space

	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
	Organizer of the game (16)		Shooting guard (14)		Small forward(13)		Power forward (9)		Center (7)	
JPL	188.250	28.063	199.923	17.806	**204.071**	**20.518**	181.222	26.850	203.000	16.782
JPH	35.3750	8.42120	38.8462	10.40710	40.0000	7.83483	37.2222	11.26696	**40.7143**	**8.63548**
S20m	4.0813	.62925	3.6369	.45058	3.5964	.37533	4.0678	.35372	3.7186	.45638
AM	20.1875	2.88025	20.3846	3.86304	**23.4286**	**3.54562**	18.8889	5.03598	19.7143	5.05682
BW	11.3125	6.92550	14.3846	7.03015	16.7143	7.28991	15.2222	6.81502	**23.1429**	**6.91444**

Legend: The jump from place to length - JPL; The jump from place to height - JPH; Running (sprint) 20 meters - S20m; Abdominal muscles - AM; Bending the wings(pumps) - BW

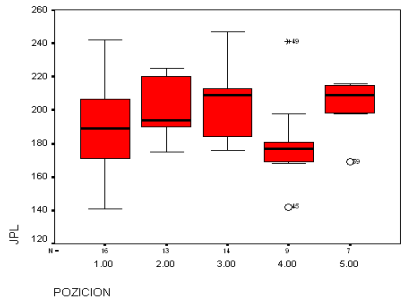


Figure 1.

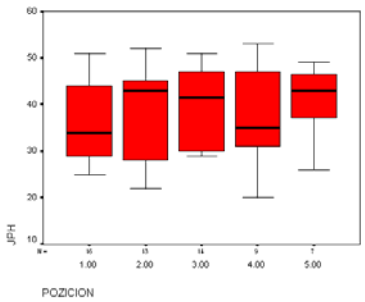


Figure 2.

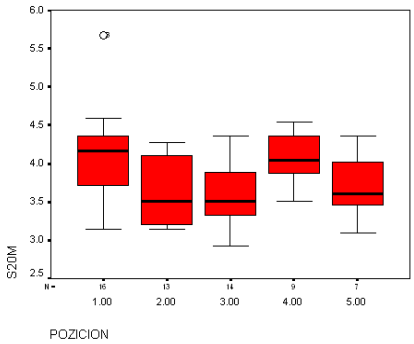
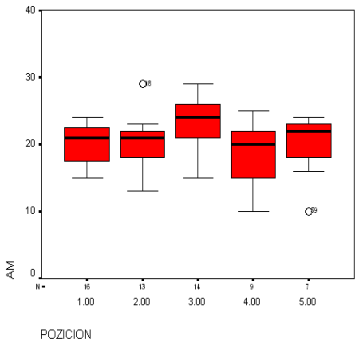


Figure 3.



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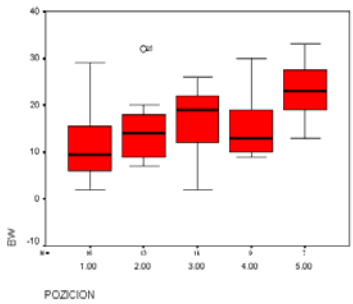

Figure 5.

ANOVA - Analysis of Variance

Table 2. Results by ANOVA for differences between positions to basketball

		Sum of Squares	df	Mean Square	F	Sig.	95% Confidence Interval for Mean	
							Lower Bound	Upper Bound
JPL	Between Groups	4348.779	4	1087.195	2.056	**.099**	189.2528	201.2557
	Within Groups	28548.407	54	528.674			183.0325	207.4760
	Total	32897.186	58					
JPH	Between Groups	231.201	4	57.800	.675	.612	35.7371	40.5680
	Within Groups	4624.426	54	85.638			34.8075	41.4975
	Total	4855.627	58					
S20m	Between Groups	2.851	4	.713	3.090	**.023**	3.6979	3.9486
	Within Groups	12.458	54	.231			3.5078	4.1386
	Total	15.309	58					
AM	Between Groups	145.926	4	36.481	2.393	**.062**	19.7266	21.7649
	Within Groups	823.260	54	15.246			18.4997	22.9919
	Total	969.186	58					
BW	Between Groups	723.877	4	180.969	3.671	**.010**	13.4387	17.1037
	Within Groups	2661.784	54	49.292			10.2342	20.3082
	Total	3385.661	58					

Legend: The jump from place to length - JPL; The jump from place to height - JPH; Running (sprint) 20 meters - S20m; Abdominal muscles - AM; Bending the wings(pumps) - BW

Presented differences between the positions of the players is applied univariante analysis of variance (ANOVA). The test of jumping from place to length of .099 is worth significant, while test is running (sprint) 20 of significant value.023. Test your abdominal muscles and bending the wings (pumps) have shown significant value between players at positions of .062 and .010, while the jumping from place to height did not show significant value.

The findings in this paper, as well as in several other works which are used in the same sample of young basketball players that were taken for the experiment according to their positions.It is also important to note that the players who have got to experiment necessarily see these basketball players have characteristics and are well structured in their positions to cover the space during the game.

Table. 3 Comparison of motor skills according to the positions of players with some studies

		JPH	S20m	AM
Cejuela,et al,.2007	PG	35.5 cm	-	
Cheryll, et al,. 2008	PG	-	-	32.91
	PF	-	-	28.14
Dežman, et al,.2002	PG	-	3.13sec	-
	SG	-	3.15sec	-
	SF	-	3.24sec	-
	PF	-	3.30sec	-
Erčulj, F.2004	PF	41.92 cm	-	-
	C	39.30 cm	-	-
Klemenčič, J. 2010	SG	-	-	29.62

Legend: The jump from place to height - JPH; Running (sprint) 20 meters - S20m; Abdominal muscles - AM. Positions:Organizer of the game -PG, Shooting guard-SG, Small forward-SF, Power forward -PF and Center - C

An adequate development of basic motor tests and specific ones, as well as good knowledge of technical-tactical elements is important in determining the position of the player in the sport of basketball which is intended success during game (Erčulj et al., 2002; Erčulj et al., 2009). The organizer of the game(PG) in the jumping from place to test height showed a value of 35.37 cm, if we compare with the study authors (Cejuela et al.,2007) 6.07 cm see the highest value that the players have to experiment marree. Sprint at at 20 meters high counts of 4.08 seconds, while players who have compared marree to have difference of 0.95 percent points of a second in favor of our basketball (Dežman et al., 2002). Test abdominal muscles have a value of 20.18, while the players who dealt authorCheryll Didi Nellie N. Obra(2008) greater value of 32.91.

Also other tests, the jumping from place to length and bend the wings (pumps), is to compare not have any significant difference from the value of the above mentioned works of authors in the position of organizer of the game.Shooting guard(SG) the jump from place height to show value for 38.8462 cm, while the players from Slovenia have a value of 29.627 centimeters (Klemenčič, J. 2010). Running(sprint) 20 meters has shown the value of 3.63 sec, the results obtained from this work are compared with the results of the same age basketball players from Slovenia and have a value of 3.24 sec (Dežman et al., 2002). As well shooting guard showed good values in tests such as the jumping from place to length, abdominal muscles and bending the wings (pumps) with the aim to scoring tries during the match, because the main goal of the player is successful realization of points for two and three points, and penetration with two open basketball. Small forward(SF) see the test as running(sprint) 20 meters, the difference is the amount of 0.35 sec in favor of basketball that we've taken for the experiment (Dežman et al., 2002). Authors suggest

that the different players in this position are important to the game of basketball because they beg basketball game speed, explosive strength and repeating strength(interative) in order to win the game. Necessarily the abilities of other skills are important for the players to line up the garment that 6.75 cm.Meanwhile power forward(PF) running (sprint) test of 20 meters, the players that we have stumbled marree to experiment to 0.76 percent to a second. The jump from place to height, the result for the players in position power forward from Slovenia is 41.92 cm, while the basketball players who have marree for the experiment is 37.22 cm (Erčulj, F. 2004). Players who play under the basket (trapeze) have lodged lower values in comparison with the other teammates on the tests that we get to experiment.

Skills which are the characteristics of these player are those skills which have an impact on the jump in order to reach the mark successful under car and block the opponent during the game.Center(C) the jump from place to height has presented results of 40.71 cm, while the players from Slovenia is 39.30 cm (Erčulj, F. 2004), the difference between these three measurements is emphasized with great value to the test center in basketball the jump from place to height. Running(sprint) 20 meters is compared with the results of the basketball players the same age and position, as we see a second 0.19 percent points of our basketball players have shown weaker value of running (Cheryll Didi Nellie N. Obra, 2008). Test repeating strength(iterative), abdominal muscles showed 8.43 best value from the labor of the author basketball (Cheryll Didi Nellie N. Obra, 2008). In this paper it is proved that there were significant differences between basketball players according to positions in which are associated test results explosive strength and repeating strength (iterative). Based on the differences between basketball players by position look at test the jumping from place to length, running(sprint) 20m test, abdominal muscles, bending the wings (pumps) reported differences significant. While the jumping from place to test height, did not show significant difference. Therefore, these differences are presented with significant value to the players by position, because the game itself is characterized basketball players who have basic motor skills and specific skills (special) in the game of basketball.

Conclusion

In conclusion, based on results obtained in tests of motor according to the positions of the players aged 16 years. Results of this study show that motor skills have shown distinction between basketball players such as organizer of the game, shooting guard, small forward, power forward and center.So, according to this study, which are positions should necessarily have special requirements and the value of specific motor skills for young basketball players in order to achieve the objectives of the game of basketball realization of points during the match.Therefore, these results provide information and suggestions for coaches who need to create training progam on position with the goal to develop as many skills specific to young basketball players.However in each position of the players have specific roles who rely on motor skills, which also suggested for these young basketball players can specialize in positional base game.Also in our region is a research published nor of basketball that has the goal structuring based on the position of the basketball players, so the remains of other authors deal with this problem to the players according to the positions of the game.

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RAZLIKE U NEKIM MOTORIČKIM SPOSOBNOSTIMA KOŠARKAŠKIH POLOŽAJA PREMA KOŠARKAŠIMA OD 16 GODINA

Sažetak
U radu se prikazuju neke razlike u motoričkim vještinama pozicije prema košarkaša u dobi od 16 godina. Uzorci papira sastoji se od 59 košarkaša u dobi od 16 godina. Oni su podijeljeni u pet skupina prema njihovim položajima na terenu za igru: Organizator igre (16), Bek šuter (13), Krilo (14), Krilni centar (9) i Centar (7). Krilo je pokazalo da veću vrijednost ima dominantna skupina igrača po položaju igrača testiranog skoka iz mjesta u dužini s vrijednošću od 204.07 ± 20. 51. cm i testiranje trbušnih mišića vrijedno 23.42 ± 30 sek. Igrači u centru su pokazali da je skok iz mjesta vrijednosti 40.71 ± 8.63 i krila testa savijanja (crpke) u vrijednosti od 23,14 ± 6,91 za 30 sekundi. Organizator igre, bekšuter i krilni centar ne pokazuju dominantne vrijednosti, dok je vrijednost iz ove pozicije u košarkaškoj utakmici dobrih rezultata. Za razlike između pozicije igrača primjenjuje se univarijantna analiza varijance (ANOVA). Test skok iz mjesta u dužini ima značajnu vrijednost .099, a trčanje (sprint test) na 20 metara ima značajnu vrijednost .023. Testiranje trbušnih mišiće i savijanje krila (crpke) pokazali su značajnu vrijednost između igrača na pozicijama .062 .010, dok skakanje iz mjesta ne pokazuje značajnu vrijednost. Na temelju rezultata zaključili smo da su organizator igre, bek šuter i centralni izvođači pokazali dominantne vrijednosti i značajne razlike prikazane su na testovima koje su pokazatelj eksplozivne snage, brzina i snaga ponavljanja (iterativni).

***Ključne riječi**: pozicije, košarka, razlike, ANOVA, motoričke sposobnosti.*

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