

## DIFFERENCE BETWEEN THE STATIC VERTICAL JUMP AND LEG APPROACHING JUMP

*(Preliminary communication)*

**Artan R. Kryeziu<sup>1</sup>, Enver Tahiraj<sup>2</sup> and Ardonit Abdullahu<sup>3</sup>**

<sup>1</sup>Lower Secondary School "Pjeter Bogdani", & Scity of Teaxhers of Physical Culture and School Sports,  
Prishtina, Kosovo.

<sup>2</sup>Ministry of Culture, Youth And Sport, Departament of Sport Prishtina, Kosovo

<sup>3</sup>Sate University of Tetovo, Faculty of Physical Education,  
Tetovo, Macedonia

### Abstract

*The aim of this paper is to establish differences between the static vertical jump (sergeant) and the leg approaching jump. This paper treated 60 male respondents aged 16-17 years. The data was processed by using the T-test method, and the systematic differences between these two variables were confirmed. This analysis has also proved that the approach jump variable has better values in comparison with the static vertical jump, which is to be expected.*

**Keywords:** *basketball players, adolescents, Sergeant jump, one foot jump, t-test*

### INTRODUCTION

Basketball is considered among the attractive sports which contain features of movement structure and different situations, related to many dynamic-explosive actions. Young people who deal with the game of basketball should be very careful, in particular with the coordination skills that are directly related to their morphological structure. Namely, basketball is more complex in comparison with other sports.

A basketball player must always be prepared for different game situations. At any point in the game, he should be prepared to catch balls under the basket with a static vertical jump, steps and vigour. For basketball players, the jump is one of the key specific skills, especially during a game under the basket. A good basketball player should show a better performance as possible, which he should consistently preserve (foster) with systematic exercises. While the static vertical jump and the approach jump, in any situation of the basketball game, there is a need for especially tall players playing in the centre, and basketball players singled out for throwing during a jump. The aim of this study-experiment is to prove the presented differences, respectively the changes introduced between the static vertical jump and the approach jump.

### METHODS

The sample of respondents treated in this research

consists of 60 male basketball players aged 16-17 years. These are active basketball players and systematically train in different basketball schools in the city of Prishtina and Gjilan. All these young people train in their respective schools with an average of 2 years, 3 times per week, 1 hour and 15 minutes.

The sample of movement variables (motor): SAR<sub>1</sub> - Static vertical jump; SAR<sub>2</sub> - Approach jump.

Data processing was performed by statistical software SPSS for Windows version 17.0, comparison of the values was done through basic statistical analysis using the statistical methods of the minimum value (Min), maximum value (Max), arithmetic mean (Mean), standard deviation (Std. Dev.), variance asymmetry of the distribution curve (Skewness), and the acuteness of the distribution curve (Kurtosis). While the T-test method was applied for the changes (differences) presented between the two variables.

### RESULTS

Table 1 reflects basic statistical parameters and shows the distribution of values for both variables separately. Based on the statistical methods of the arithmetic mean (Mean), the sample of this experiment, respectively, this study has proved to be homogeneous between these variables. If we compare these data with the experiments, namely the studies of other researchers we observe that the data shows approximately the same results.

Table 1. Basic statistical parameters in motor space

	N	Min.	Max.	Mean	Std.Dev.	Skewness	Kurtosis
SAR <sub>1</sub>	60	20.00	63.00	48.15	8.78	-.847	.684
SAR <sub>2</sub>	60	20.00	66.00	50.48	8.78	-.916	1.327

Tabela 2. T-Test for determining the differences

		Mean	N	Std. Dev.	Std. Error Mean
Pair 1	SAR <sub>1</sub>	48.1593	60	8.92722	1.21484
	SAR <sub>2</sub>	50.4815	60	8.78724	1.19579
Pair 1	SAR <sub>1</sub> & SAR <sub>2</sub>	N	60	Correlation	Sig.
				.955	.000
Pair 1	SAR <sub>1</sub> & SAR <sub>2</sub>	Paired Mean	Std. Dev.	t	Sig. (2-tailed)
		-2.3222	2.64865	-6.443	.000

Based on the results presented in table number 2, we observed that between the variables of static vertical jump and the approach differ in the level of reliability in the value of 0.000 (Sig.).

While the distinction between these groups will be compared through the arithmetic average (mean), which in this case the value differs only by 2.32 cm. These parameters are explained in such way stating that the approach jump has better values than the static high jump variable.

## CONCLUSIONS

The aim of this paper is reached, where through the difference between the static vertical jump and the approach jump we presented the systematic values of these two parameters. During the measurements of these two parameters, we noticed that some basketball players have achieved better result using the approach jump while others have done the opposite. However, in most cases while playing basketball the approach jump, especially in situational terms is required in the very beginning of the game. Meanwhile, this jump affects the centre position players as well, during their realized shots, which is at the same time related to the accurate and furious shots, requiring that the basketball player should raise his arms over the head as soon as possible, because basketball is one of the most dynamic-explosive sports, characterized by these two jumps. For having a greater success in numerous jumps in the game, it mostly depends on the performance of the basketball players during the meeting. The results obtained from this study indisputably confirm the importance of the high approach jump during the game of basketball, which you

can serve for more practical results and values.

## REFERENCES

- Dizdar, D. (2006). *Multivijajante metode (Kvantativne metode)* [Multivariate methods (Quantitative methods). In Croatian]. Zagreb: Kinezioloski fakultet.
- Erculj, F. (2004). Correlation between height and duration of take-off in various jumps of young basketball players. *Acta Universitatis Carolinae Kineziologija*, 40-47.
- Fattorini, I. (2005). Body composition and vertical jump performance in junior players. *FIBA Assist Magazine*, (15), 58.
- Ferragut, C., Rodriguez, N. & Vila, H. (2011). Force generation in male basketball players. *Journal of Sport Sciences-Portuguese*, (11), 81-84.
- Maffioletti, N. (2000). The Effects of Electromyostimulation Training and Basketball Practice on Muscle Strength and Jumping. *Ability Int. J. Sports Med.*, (21), 437-443
- Stauffer, K. (2005). *The comparison of the max jones quadrathlon with the vertical jump and Wingate cycle tests as a metod to assess anaerobic power in femal division of the college basketball player* (Unpublished doctoral dissertation, University of Pittsburgh) Pittsburgh: University of Pittsburgh.
- Salihu, H. (2007). *Utvrđivanje kvantitativnih promjena nekih pokazatelja mladih košarkaša pod utjecajem kinezioloških operatora* [Identification of quantity changes of some indicators with young basketball players under influence of kinesiology operators. In Croatian] *Acta kinesiologica*, 1(1), 26-29.
- Yuan, Sh. (2010). Development of vertical jump performance among 4-20 year-old male and Female Students. *College of sports & Recreation*, 333-338.

Wang, L. (2004). Age effect on dumping techniques and lower limb stiffness during vertical jump.

*Research in Medicine Taylor & Francis Inc*, (12), 209-219.

Correspondence:

Artan Kryeziu

Lower Secondary School "Pjeter Bogdani"

Agim Ramadani 38, 10000 *Prishtina, Kosovo*

E-mail: artankryeziu88hotmail.com