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## **THE DISTINCTION BETWEEN TEAMS RANKED THIRD AND FOURTH IN THE SUPER LEAGUE VOLLEYBALL OF KOSOVO**

### **Introduction**

Unlike other complex kinesiological activities, sports discipline volleyball is interesting, complex, dynamic, motivating and very attractive to all generations. In volleyball game, the actions are manifested with rapid motor reactions, both in the phase of defense as well as attack, where teams attempt to score more points with more successful attacks.

To be more successful in all phases of a game it requires players to possess such anthropometric parameters that correspond to the volleyball game, to have the reaction speed in different situations, to have a good perception of time and space, as well as to have basic motor skills especially with high explosive strength of the legs and perfect technical execution elements.

Given that the basic elements of volleyball include a variety of motor actions so that their execution can be straight, and also efficient, is completely understandable and reasonable to expect that work to improve with the training of these elements and affect the development of motor skills (Nesic, Sikimić, Ilic and Stojanovic, 2011). Contemporary volleyball game requires all players a high level of general motor skills, as well as specific - typical of a volleyball game and for certain particular positions of players (Martinovic et al, 2011). Players should be well prepared to perform perfectly all the technical and tactical elements.

### **Methods**

For the realization of this research there have been included 12 volleyball players from the team of KV "Granit com" ranked in third place in the Super League of Kosovo in Volleyball and 12 volleyball players from the team of KV "Te Luzha", ranked in fourth place in Super League of Kosovo in volleyball. There have been applied 4 anthropometric variables which are: body weight (APESHA), body height (ALARTE), arm length (AGJKR), forearm length (AGJPK); 5 basic motor variables: the long jump from place (MKVGJ), jump high from place (MKVL), taping hand (MTD), taping feet (MTK), running 20 meters from a fast start (MV20M); and 7 situational tests: pass the ball with the fingers on vertical target (SPTGR), pass the ball to the forearm ("hammer") in target vertical (SPTGQ), pass the ball with fingers on the horizontal target (SPTK), pass the ball with the forearm ("hammer") in horizontal target (SPTÇM), pass the ball with the fingers jumping in the horizontal target (SPTÇR), tennis service in horizontal target (SPSHT) service to jump in the horizontal target (SPSHK).

For each applied variable were calculated these values: 1. Basic central and dispersion, 2. Asymmetry coefficient ("skjunis") and height distribution ("kurtosis"), 3. The verification of arithmetic difference in averages between the two teams in anthropometric and motor parameters, as well as situational precision through applying the discriminatory analysis of t-test for independent variables.

### Results

We start the analysis of Table 1 by observing the column of the standardized coefficients of distribution asymmetry (skewness), which provides the verification of the compliance of empirical data with theoretical ideal Gauss distribution. The values of the asymmetry coefficients for each anthropometric and motor variable, and situational precision are far away from the critical values and very close to the optimum value that represents discrimination test. The earned distributions show that the applied anthropometric variables did not show any pronounced asymmetry, and the motor and situational precision tests did not present complicated tasks and are selected in full compliance with the age, gender and profession. Further analysis of the same coefficients indicates a negative asymmetry - dominated hypo kurtosis in most motor and situational precision tests.

**Table 1.** Basic indicators of statistical anthropometric, motor and situational precision variables to volleyball players of KV "Granit com"

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
AWEIGHT	12	66.48	97.68	80.9133	9.95073	-.002	-1.207
AHIGH	12	177.75	198.80	186.4667	8.79071	.068	-2.209
AGJKR	12	34.35	41.20	36.1292	2.15295	1.133	1.315
AGJPK	12	24.10	31.60	27.2250	2.04412	.599	.406
MKVGJ	12	204.70	291.32	269.6267	27.23156	-1.498	1.813
MKVL	12	39.30	49.40	43.0083	3.11316	.611	-.249
MTD	12	22.00	37.00	29.2500	5.61046	-.340	-1.642
MTK	12	20.00	28.00	22.8333	2.62274	.834	.040
MV20M	12	3.40	4.10	3.6500	.23160	.843	-.370
SPTGR	12	33.00	78.00	56.5833	13.20095	-.091	-.625
SPTGQ	12	26.00	43.00	35.5000	5.23103	-.226	-.629
SPTK	12	10.00	36.00	22.6667	8.57410	-.126	-1.258
SPTÇM	12	10.00	28.00	19.4167	5.61586	-.446	-.246
SPTÇR	12	11.00	32.00	21.9167	6.40253	-.525	-.194
SPSHT	12	5.00	12.00	7.8333	2.28963	.517	-.718
SPSHK	12	5.00	9.00	7.6667	1.37069	-.800	-.512

Basic central and fundamental parameters, the dispersive asymmetry coefficients ("skjunis") and the distribution of height ("kurtosis") (Table 2.) provide a result almost the same as in Table 1. In this table the values of the coefficients of asymmetry for each anthropometric and motor variable, and situational precision are away from the critical values and very close to the optimum value that represents discrimination test. Distributions earned show that the applied anthropometric variables did not show any pronounced asymmetry and motor and situational precision tests not present complicated tasks and are selected in full compliance with the age, gender and profession. Further analysis of the same coefficients indicates a domination of negative asymmetry – hypo kurtosis in most motor and situational precision tests, which means that the values of these tests tend to go the direction of the lower ones. The biased results of the motor tests, and the situational precision toward the lower ones shows a low motivation of the volleyball players in performing these motor and situational tests.

**Table 2.** Basic statistical indicators of anthropometric, motor and situational variables, to volleyball playes of KV "The Luzha"

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
AWEIGHT	12	67.50	92.68	80.7433	8.85671	-.162	-1.790
AHIGH	12	173.70	194.20	185.7458	8.73086	-.097	-2.242
AGJKR	12	31.80	40.40	35.8500	2.29931	.221	.151
AGJPK	12	23.10	32.90	27.1083	2.59105	.655	1.179
MKVGJ	12	201.54	281.50	236.2017	28.47705	.471	.637
MKVL	12	39.10	48.20	42.0917	2.91531	.782	-.258
MTD	12	20.00	37.00	28.9167	5.72805	-.411	-1.430
MTK	12	19.00	27.00	22.5833	2.42930	.358	-.480
MV20M	12	3.20	4.30	3.9917	.29064	-1.981	5.005
SPTGR	12	16.00	72.00	53.0000	16.58586	-.973	.880
SPTGQ	12	13.00	41.00	32.8333	7.64952	-1.686	3.610
SPTK	12	9.00	33.00	21.5000	8.38288	-.145	-1.283
SPTÇM	12	7.00	29.00	18.4167	6.11196	-.215	.285
SPTÇR	12	3.00	28.00	20.9167	7.46456	-1.490	2.027
SPSHT	12	4.00	11.00	7.5833	2.15146	-.005	-.865
SPSHK	12	3.00	10.00	5.0000	1.85864	1.835	4.708

To prove that there is a statistically significant difference between the KV volleyball players of KV "Granit com" ranked in third place in the Super League of Kosovo in volleyball and the volleyball players of KV " Te Luzha" ranked on the fourth place in the Super League of Kosovo in volleyball, in some anthropometric,

motor and situational precision variables has been applied the T - test to two groups of the independent variables.

The difference between the 12 volleyball players of KV "Granit com", and the volleyball players of KV "Te Luzha" is confirmed in only two motor tests and one situational precision, and in the tests: long jump from place (MKVGJ) Mean Diff. = 25278,  $t = 2.308$ ,  $df = 22$ ,  $sig. = 0.031$ ), running 20 meters from a fast start (MV20M) (Mean Diff. = -3.4125,  $t = -3.185$ ,  $df = 22$ ,  $sig. = 0.004$ ) service with the jump in the horizontal target (SPSHK) (Mean Diff. = 2.666;  $t = 4.000$ ;  $df = 22$ ,  $sig. = 0.001$ )

Discriminative analysis results show that differences in arithmetic averages have been in favor of the players of KV "Granit com", (except for the test of run at 20 meters from a fast start (MV20M) where the results of t - test are presented in Table 3.

**Table 3.** The difference in anthropometric, motor and situational variables between players in the KV "Granit com" and KV "Te Luzha"

	Levene's Test for Equality of Variances		t-test for Equality of Means					95% Confidence Interval of the Diff.	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
AWEIGHT	.188	.669	.044	22	.965	.170	3.845	-7.805	8.145
AHIGH	.006	.940	.202	22	.842	.720	3.576	-6.696	8.138
AGJKR	.105	.749	.307	22	.762	.279	.909	-1.606	2.164
AGJPK	.422	.523	.122	22	.904	.116	.952	-1.859	2.092
MKVGJ	.012	.915	2.308	22	<b>.031</b>	25.278	10.952	2.564	47.992
MKVL	.042	.840	.745	22	.464	.916	1.231	-1.636	3.470
MTD	.003	.956	.144	22	.887	.333	2.314	-4.466	5.133
MTK	.019	.892	.242	22	.811	.250	1.032	-1.890	2.390
MV20M	.002	.968	-3.185	22	<b>.004</b>	-3.41	.107	-.564	-.119
SPTGR	.240	.629	.586	22	.564	3.583	6.119	-9.107	16.274
SPTGQ	.360	.555	.997	22	.330	2.666	2.675	-2.881	8.214
SPTK	.063	.804	.337	22	.739	1.166	3.461	-6.012	8.345
SPTÇM	.023	.880	.417	22	.680	1.000	2.396	-3.969	5.969
SPTÇR	.084	.775	.352	22	.728	1.000	2.838	-4.887	6.887
SPSHT	.029	.866	.276	22	.785	.250	.906	-1.630	2.130
SPSHK	.015	.904	4.000	22	<b>.001</b>	2.666	.666	1.284	4.049

## Discussion

The results obtained show that the players of the two teams of volleyball of Kosovo Super League ranked in third and fourth place, which were involved in research do not differ among themselves in anthropometric characteristics ( $p > 0.05$ ). KV "Granit Com" has had better results on tests of explosive force in the long jump from place (MKVGJ), ( $P < 0.05$ ), while volleyball team of KV "Te Luzha" has had

better results in jogging 20 meters start from the top (MV20M), ( $p < 0:01$ ). Situational test does not show statistically significant difference observed between the two teams apart in the service test jump in the horizontal target (SPSHK) ( $p < 0:01$ ) where KV "Granit com" had better results.

Discriminative analysis of t - test by which it is estimated the difference between the arithmetic averages of KV volleyball players "Granit Com" and the V volleyball players "Te Luzha" in some motor tests and situational precision shows that of volleyball kinesiological treatment of the two teams in terms of quality has been approximately the same.

Results of this study shows for a qualitative selection on the level of Super League of Kosovo both teams are ranked in third and fourth position, as well as in terms of conditional preparation. By comparing the mean of heights and some other longitudinal variables, and Situational accuracy in a sample to be tested from Kosovo Super League volleyball players, obtained results are very similar with some reported results so far achieved in the game of volleyball samples (Marelič et al. 2008, Strahonja, 1978).

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### **Aknowledgement**

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*THE DISTINCTION BETWEEN TEAMS RANKED THIRD AND FOURTH IN THE SUPER LEAGUE VOLLEYBALL OF KOSOVO.*

*Introduction: When it is about elite male volleyball players, it is always meant about players that possess such anthropometric parameters which correspond with volleyball game. In this research we are deal with two teams of the super league of Kosovo in volleyball. The goal of this study is to verify the differences between the two teams in volleyball in some anthropometric characteristics, basic motor skills and situational tests. Methods: For the realization of this research, there were included 12 volleyball player from the team KV "Granit com" and 12 from the team KV "Te Luzha". There are applied 4 anthropometric variables (body weight, body height, arm length, forearm length), 5 basic motor variables (long jump from place, high jump from the place taping hand, taping feet, jogging with 20 meters with a fast start), and 7 situational tests (pass the ball with the fingers on target vertical expulsion of the ball with the forearm ("hammer") in vertical target, passing the ball with the fingers in a horizontal target, the expulsion of the ball with the forearm ("hammer") in horizontal target, pass the ball with fingers to jump in the horizontal target, tennis service in horizontal target, the target service with the horizontal jump. For processing the obtained results from the measurements and proving the difference between the teams in anthrop motored parameters, was used the discriminatory analysis using the t-test for independent variables. Results: The results obtained show that the players of the two volleyball teams of the Super League in of Kosova, involved in the research do not distinguish between them in anthropometric characteristics ( $p > 0:05$ ). The team KV "Granit Com" has had better results in some motor variables of the explosive force and the one of long jump from the place ( $P < 0:05$ ) and running 20 meters from a fast start ( $p < 0:01$ ). Situational tests are not a statistically significant difference observed between the two teams. Discussion: In order to verify the statistical significance through the t-test, the value of t-test should be established, which for significant level  $p < 0.05$  is  $T > 1.97$  above 20 entities. The results show that statistically valid changes with valid significant tests are present in anthropometric and movement space. Table nr.15 presents the results of two teams "Graniti Com" and "Te Luzha". In this case, the statistical valid changes are presented in three tests: high jump, 20 meters speed run and accuracy of the service in jumping. References: Liba MR, Stauff MR (1963). Research Quarterly, 35, 59–63. Strahova A (1972). Kineziologija, 1, 19-72. Nikqi V. (2008). Differences of some anthropmetric and motor characteristics as well as several situational testes among Kosovo Superlague Volleyball players, 35-64. Strahonja A, Jankovic V, Shnajder V (1982), Kineziologija, 11, 46-51.*