DIFFERENCES BETWEEN SOME ANTHROPOMETRIC PARAMETERS AND MOTOR SKILLS BETWEEN JUNIOR AND CADET VOLLEYBALL PLAYERS

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Abstract

This study was carried out in order to find the main differences between some anthropometric parameters and motor skills. More precisely, it is intended to reach information and added values about the differences in the development of anthropometric and motor skills between junior and cadet volleyball players, where the sample of this study are the players of KV Drita in Gjilan. Within the selection of tests, are included those tests which are adapted to the type of sport, and which are suitable for the age of the players and also for the conditions for measurement.

From the anthropometric tests are selected 13 (thirteen) variables and one test feature, which is BMI, while for the motor skills tests, we selected 7 (seven) variables.

In the method of processing the results, to analyze the results of the anthropometric parameters and basic motor skills, are used statistical and qualitative work methods, while in order to provide a more specific and accurate research, is also used the method of literature analysis, the method of historical analysis and the method of comparative analysis. With the help of the tests and working methods used in this study, it was possible to prove that there are significant differences between anthropometric parameters and motor skills between junior and cadet volleyball players. All this achieved through theoretical data which undoubtedly have also influenced the appearance of very important practical data, which can be applied in the future by other researchers.

Keywords: players, volleyball, characteristics, parameters, variables, motor skills.

1. Introduction

Physical education, sports and recreation are an inseparable part of physical culture as well as everyday life, in this context volleyball is also included as one of the biggest team sports belonging to the group of collective games. Volleyball like collective sport has an added value for society and as such since the early times it has taken on large development dimensions in different countries of the world including Kosovo as well as being placed in the programs of clubs, school federations as one of the most important sports games. The game of volleyball is characterized by fast and dynamic movements that include jumps, shots, passes and receptions, blocks, etc., volleyball also includes high psychomotor skills, sensitivity to time and space, accuracy and necessary balance, etc**.**

As in other sports, a certain level of anthropometric characteristics and motor skills is required in volleyball, and at the same time there are always demands for their improvement according to the conditions and situations created. Knowing that playing and training in volleyball affects tempering, strengthening and developing health. Volleyball, like other sports, requires a certain

level of morphological characteristics and motor skills in order for players to act successfully in situational conditions. From what was said above, it is clear that continuous theoretical research and practical verification of the mentioned specifics is necessary, and in volleyball this would also mean the verification of some morphological characteristics. In addition to the diversity of sports, which is obvious, there is a diversity of skill structures and anthropological characteristics among athletes, because if there were no research on equipment, methods and training loads, as well as their influence on their development, would be meaningless and unnecessary (Gaurav, Singh, and Singh, 2011). Thinking of volleyball as a sports lifestyle in the whole sports system, we can define it as an extremely complex phenomenon.

Work method

The samples collected for this research were taken from the female volleyball players of the Drita volleyball club in Gjilan, where the samples of 60 volleyball players were taken for the study and were divided based on the competition category, 30 volleyball players from the junior category and 30 from the cadet category. The tests were conducted in the internal premises of the club (sports hall), respectively during the training of the club. Testing of anthropometric variables and motor skills are described in detail as follows: : 1. APESHA - body weight, 2. ALARTE - Body height, 3. APGJOK - Chest circumference, 4. AGJKR - Arm length, 5. AGJSHD - Palm length, 6. AGJKE - Leg length (femur), 7. AIDHLBA - Subcutaneous adipose tissue of the abdomen, 8. AIDHSPR - Subcutaneous adipose tissue of the suprailiac, 9. AIDHBI - Subcutaneous adipose tissue of the biceps, 10. AIDHTR - Subcutaneous adipose tissue of the triceps, 11. AIDHSHP - Subcutaneous adipose tissue of the spine, 12. AIDHKO - Subcutaneous adipose tissue of the thigh, 13. AIDHNGJ - Subcutaneous adipose tissue of the lower knee, 14. BMI - BMI (body mass index), 15. MV10M - 10M Run, 16. MV20M - 20M Run, 17. MTPD - Hand Taping, 18. MTPK - Foot Taping, 19. MKVL - High Jump, 20. T-Test - T-Test, 21. TAILL - Illinois agility test.

Results and discussions

After the completion of the samples taken from the tested group and their description, we processed the findings through the SPSS software program. For the group of test subjects, in table 1 we have presented the basic statistical parameters of the anthropometric characteristics of volleyball players from the junior category, in table 2 we have described the basic statistical parameters of the motor skills of volleyball players from the junior category, where the calculation of the basic statistical parameters that show the value of the minimum result (Minimum), the maximum result (Maximum), the average values (Mean), the average values of the standard deviation (Std.Deviation), the result of the curvature (Skewness), the probability distribution (Kurtosis), the coefficient of variation (Kv) . In table 3 we present the anthropometric correlations of the junior category volleyball players, while in table 4 the correlations of the motor skills of the junior category volleyball players. Table 5 shows the basic statistical parameters of the anthropometric characteristics of the cadet category volleyball players, while table 6 shows the basic statistical parameters of the anthropometric characteristics of the cadet category volleyball players. In table 7 we have presented the

anthropometric correlations of the cadet category volleyball players, while in table 8 the correlations of the motor skills of the cadet category volleyball players. Table 9 presents the independent sample T-Test results of the volleyball players of both cadet-junior categories.

Table 1. Basic statistical parameters of anthropometric characteristics of volleyball players from the junior category.

Junioret – Antropometri-Deskripcion	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis	Kv
APESHA	30	47.59	73.8	61.87	6.81	-0.041	-0.668	11.01
ALARTE	30	165	184	173.33	5.00	0.374	-0.61	2.88
APGJOK	30	71	98.6	81.33	6.62	1.052	0.927	8.13
AGJKR	30	72.9	81.6	76.25	2.27	0.396	-0.521	2.97
AGJSHD	30	17.9	20	19.02	0.56	0.098	-0.771	2.94
AGJKE	30	91.4	101.6	95.40	2.53	0.48	-0.257	2.66
AIDHLBA	30	5	23	12.17	4.60	0.636	0.096	37.78
AIDHSPR	30	4.4	19.8	10.54	4.00	0.65	0.107	37.99
AIDHBI	30	2.8	10.6	6.28	2.50	0.104	-1.143	39.74
AIDHTR	30	3	17.3	10.28	4.27	-0.058	-1.061	41.53
AIDHSHP	30	4.4	19.1	11.42	4.06	0.043	-0.963	35.53
AIDHKO	30	3.1	20.6	10.52	4.54	0.178	-0.626	43.17
AIDHNGJ	30	3.9	17.4	11.01	4.00	-0.299	-1.105	36.29
BMI	30	16.7	23.2	20.54	1.60	-0.72	0.05	7.80

Table 2. The basic statistical parameters of the motor skills of volleyball players from the junior category.

Junioret – Motorikë-Deskripcion	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis	Kv
MV10M	30	2.06	2.73	2.21	0.19	1.691	2.148	8.68
MV20M	30	3.12	4.18	3.41	0.24	1.453	2.332	7.16
MTPD	30	30	48	38.53	5.41	0.261	-1.033	14.03
MTPK	30	22	36	29.47	4.34	-0.072	-1.265	14.72
MKVL	30	30	48	38.87	5.01	0.16	-0.807	12.89
TTEST	30	11.28	15.28	12.86	1.05	0.737	-0.326	8.20
TAILL	30	16.03	21.34	18.26	1.54	0.687	-0.537	8.42

Table 3. Anthropometric correlations of volleyball players from the junior category.

Correlations

Junioret – Antropometri-Korelacion		APE SHA	ALA RTE	APG JOK	AGJ KR	AGJ SHD	AGJ KE	AIDH LBA	AID HSPR	AID HBI	AID HTR	AIDH SHP	AID HKO	AIDH NGJ	BMI
APESHA	Pearson Correlation	1	.740**	.559**	.771**	.756**	.646**	.280	.256	.266	.271	.131	.238	.312	.858**
	Sig. (2-tailed)		.000	.001	.000	.000	.000	.134	.171	.155	.147	.491	.206	.093	.000
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
ALARTE	Pearson Correlation	.740**	1	.263	.901**	.888**	.878**	.241	.231	.177	.212	.052	.167	.293	.291

	Sig. (2-tailed)	.000		.161	.000	.000	.000	.199	.220	.348	.262	.787	.379	.116	.118
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
APGJOK	Pearson Correlation	.559**	.263	1	.303	.229	.248	.412*	.409*	.304	.316	.205	.336	.388*	.600**
	Sig. (2-tailed)	.001	.161		.104	.224	.187	.024	.025	.103	.089	.277	.069	.034	.000
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
AGJKR	Pearson Correlation	.771**	.901**	.303	1	.859**	.853**	.278	.264	.259	.284	.041	.120	.284	.411*
	Sig. (2-tailed)	.000	.000	.104		.000	.000	.138	.158	.168	.128	.829	.526	.128	.024
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
AGJSHD	Pearson Correlation	.756**	.888**	.229	.859**	1	.807**	.240	.227	.143	.172	.008	.133	.246	.401*
	Sig. (2-tailed)	.000	.000	.224	.000		.000	.202	.228	.451	.363	.966	.484	.191	.028
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
AGJKE	Pearson Correlation	.646**	.878**	.248	.853**	.807**	1	.192	.186	.178	.211	-.017	.066	.213	.246
	Sig. (2-tailed)	.000	.000	.187	.000	.000		.308	.325	.347	.263	.930	.730	.259	.190
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
AIDHLBA	Pearson Correlation	.280	.241	.412*	.278	.240	.192	1	.997**	.795**	.789**	.618**	.856**	.806**	.200
	Sig. (2-tailed)	.134	.199	.024	.138	.202	.308		.000	.000	.000	.000	.000	.000	.289
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
AIDHSPR	Pearson Correlation	.256	.231	.409*	.264	.227	.186	.997**	1	.786**	.781**	.612**	.848**	.809**	.174
	Sig. (2-tailed)	.171	.220	.025	.158	.228	.325	.000		.000	.000	.000	.000	.000	.357
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
AIDHBI	Pearson Correlation	.266	.177	.304	.259	.143	.178	.795**	.786**	1	.992**	.862**	.858**	.852**	.231
	Sig. (2-tailed)	.155	.348	.103	.168	.451	.347	.000	.000		.000	.000	.000	.000	.219
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
AIDHTR	Pearson Correlation	.271	.212	.316	.284	.172	.211	.789**	.781**	.992**	1	.883**	.869**	.877**	.212
	Sig. (2-tailed)	.147	.262	.089	.128	.363	.263	.000	.000	.000		.000	.000	.000	.262
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
AIDHSHP	Pearson Correlation	.131	.052	.205	.041	.008	-.017	.618**	.612**	.862**	.883**	1	.885**	.854**	.137
	Sig. (2-tailed)	.491	.787	.277	.829	.966	.930	.000	.000	.000	.000		.000	.000	.469
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
AIDHKO	Pearson Correlation	.238	.167	.336	.120	.133	.066	.856**	.848**	.858**	.869**	.885**	1	.906**	.199
	Sig. (2-tailed)	.206	.379	.069	.526	.484	.730	.000	.000	.000	.000	.000		.000	.293
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
AIDHNGJ	Pearson Correlation	.312	.293	.388*	.284	.246	.213	.806**	.809**	.852**	.877**	.854**	.906**	1	.201
	Sig. (2-tailed)	.093	.116	.034	.128	.191	.259	.000	.000	.000	.000	.000	.000		.287
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
BMI	Pearson Correlation	.858**	.291	.600**	.411*	.401*	.246	.200	.174	.231	.212	.137	.199	.201	1
	Sig. (2-tailed)	.000	.118	.000	.024	.028	.190	.289	.357	.219	.262	.469	.293	.287	
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Table 4. Correlations of motor skills of volleyball players from the junior category.

Correlations								
Junioret – Motorikë-Korelacion		MV10M	MV20M	MTPD	MTPK	MKVL	TTEST	TAILL
MV10M	Pearson Correlation	1	.844**	-.163	-.114	-.688**	.816**	.719**
	Sig. (2-tailed)		.000	.390	.550	.000	.000	.000
	N	30	30	30	30	30	30	30
MV20M	Pearson Correlation	.844**	1	-.252	-.161	-.773**	.893**	.831**
	Sig. (2-tailed)	.000		.180	.395	.000	.000	.000
	N	30	30	30	30	30	30	30
MTPD	Pearson Correlation	-.163	-.252	1	.816**	.142	-.204	-.131
	Sig. (2-tailed)	.390	.180		.000	.456	.280	.491
	N	30	30	30	30	30	30	30
MTPK	Pearson Correlation	-.114	-.161	.816**	1	.246	-.170	-.167
	Sig. (2-tailed)	.550	.395	.000		.190	.369	.378
	N	30	30	30	30	30	30	30
MKVL	Pearson Correlation	-.688**	-.773**	.142	.246	1	-.768**	-.769**
	Sig. (2-tailed)	.000	.000	.456	.190		.000	.000
	N	30	30	30	30	30	30	30
TTEST	Pearson Correlation	.816**	.893**	-.204	-.170	-.768**	1	.950**
	Sig. (2-tailed)	.000	.000	.280	.369	.000		.000
	N	30	30	30	30	30	30	30
TAILL	Pearson Correlation	.719**	.831**	-.131	-.167	-.769**	.950**	1
	Sig. (2-tailed)	.000	.000	.491	.378	.000	.000	
	N	30	30	30	30	30	30	30
**. Correlation is significant at the 0.01 level (2-tailed).								

Table 5. Basic statistical parameters of anthropometric characteristics of volleyball players from the cadet category.

Kadet Antropometri Deskripcion	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis	Kv
APESHA	30	40	80	51.9667	11.69876	0.991	0.022	22.51
ALARTE	30	145	173	157.5333	7.32842	0.277	-0.562	4.65
APGJOK	30	66	92	76.0333	7.80576	0.546	-0.92	10.27
AGJKR	30	63.8	76.12	69.2793	3.30389	0.304	-0.801	4.77
AGJSHD	30	15.3	19	16.9467	0.96087	0.33	-0.691	5.67
AGJKE	30	83	103	92.7333	5.13227	0.201	-0.686	5.53
AIDHLBA	30	5.8	31.6	13.8933	6.05964	1.854	3.081	43.62
AIDHSPR	30	4.9	28.6	12.0667	5.31565	1.849	3.387	44.05
AIDHBI	30	4.4	16.9	9.2267	3.11104	0.649	0.096	33.72
AIDHTR	30	7.4	28.2	15.1667	4.97056	0.711	0.425	32.77
AIDHSHP	30	6.8	29	11.7533	4.54698	2.044	6.004	38.69
AIDHKO	30	6.8	29.2	12.4633	5.42964	1.93	3.436	43.57
AIDHNGJ	30	6.6	24.9	11.4133	4.31395	1.946	3.583	37.80
BMI	30	16.3	28.2	21.09	3.43063	0.733	-0.572	16.27

Table 6. Basic statistical parameters of the motor skills of volleyball players from the cadet category.

Kadet Motorik Deskripcion	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis	Kv
MV10M	30	2.02	2.9	2.2417	0.22513	1.58	1.874	10.04
MV20M	30	3.19	4.2	3.4837	0.29866	1.178	0.445	8.57
MTPD	30	25	43	32.7	4.61743	-0.094	-0.522	14.12
MTPK	30	14	29	23.3667	3.6529	-0.666	0.044	15.63
MKVL	30	23	39	31.7333	4.45617	-0.417	-0.648	14.04
TTEST	30	12.2	16.1	13.4233	1.06599	1.261	0.727	7.94
TAILL	30	17.6	21.4	19.14	0.94417	0.624	0.61	4.93

Table 7. Anthropometric correlations of volleyball players from the cadet category.

Correlations		APESHA	ALARTE	APGJOK	AGJKR	AGJSHD	AGJKE	AIDHLBA	AIDHSPR	AIDHBI	AIDHTR	AIDHSHP	AIDHKO	AIDHNGJ	BMI
Kadet Antropometri Korelacion															
APESHA	Pearson Correlation	1	.617**	.932**	.631**	.594**	.650**	.654**	.597**	.547**	.527**	.462*	.588**	.612**	.895**
	Sig. (2-tailed)		.000	.000	.000	.001	.000	.000	.000	.002	.003	.010	.001	.000	.000
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
ALARTE	Pearson Correlation	.617**	1	.463**	.990**	.790**	.910**	.372*	.318	.211	.181	.248	.301	.332	.217
	Sig. (2-tailed)	.000		.010	.000	.000	.000	.043	.087	.262	.339	.187	.106	.073	.250
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
APGJOK	Pearson Correlation	.932**	.463**	1	.494**	.434*	.561**	.540**	.471**	.415*	.393*	.350	.453*	.482**	.901**
	Sig. (2-tailed)	.000	.010		.005	.016	.001	.002	.009	.022	.031	.058	.012	.007	.000
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
AGJKR	Pearson Correlation	.631**	.990**	.494**	1	.771**	.922**	.355	.288	.192	.159	.202	.267	.302	.243
	Sig. (2-tailed)	.000	.000	.005		.000	.000	.054	.122	.310	.401	.284	.154	.105	.196
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30

AGJSHD	Pearson Correlation	.594**	.790**	.434*	.771**	1	.736**	.221	.205	.455*	.424*	.406*	.230	.236	.284
	Sig. (2-tailed)	.001	.000	.016	.000		.000	.240	.276	.012	.020	.026	.220	.210	.128
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
AGJKE	Pearson Correlation	.650**	.910**	.561**	.922**	.736**	1	.340	.262	.194	.167	.123	.239	.280	.330
	Sig. (2-tailed)	.000	.000	.001	.000	.000		.066	.162	.304	.378	.518	.203	.133	.075
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
AIDHLBA	Pearson Correlation	.654**	.372*	.540**	.355	.221	.340	1	.980**	.684**	.681**	.634**	.970**	.984**	.604**
	Sig. (2-tailed)	.000	.043	.002	.054	.240	.066		.000	.000	.000	.000	.000	.000	.000
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
AIDHSPR	Pearson Correlation	.597**	.318	.471**	.288	.205	.262	.980**	1	.715**	.718**	.729**	.996**	.997**	.550**
	Sig. (2-tailed)	.000	.087	.009	.122	.276	.162	.000		.000	.000	.000	.000	.000	.002
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
AIDHBI	Pearson Correlation	.547**	.211	.415*	.192	.455*	.194	.684**	.715**	1	.994**	.755**	.732**	.725**	.532**
	Sig. (2-tailed)	.002	.262	.022	.310	.012	.304	.000	.000		.000	.000	.000	.000	.002
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
AIDHTR	Pearson Correlation	.527**	.181	.393*	.159	.424*	.167	.681**	.718**	.994**	1	.773**	.738**	.729**	.527**
	Sig. (2-tailed)	.003	.339	.031	.401	.020	.378	.000	.000	.000		.000	.000	.000	.003
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
AIDHSHP	Pearson Correlation	.462*	.248	.350	.202	.406*	.123	.634**	.729**	.755**	.773**	1	.751**	.731**	.395*
	Sig. (2-tailed)	.010	.187	.058	.284	.026	.518	.000	.000	.000	.000		.000	.000	.031
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
AIDHKO	Pearson Correlation	.588**	.301	.453*	.267	.230	.239	.970**	.996**	.732**	.738**	.751**	1	.994**	.543**
	Sig. (2-tailed)	.001	.106	.012	.154	.220	.203	.000	.000	.000	.000	.000		.000	.002
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
AIDHNGJ	Pearson Correlation	.612**	.332	.482**	.302	.236	.280	.984**	.997**	.725**	.729**	.731**	.994**	1	.562**
	Sig. (2-tailed)	.000	.073	.007	.105	.210	.133	.000	.000	.000	.000	.000	.000		.001
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30
BMI	Pearson Correlation	.895**	.217	.901**	.243	.284	.330	.604**	.550**	.532**	.527**	.395*	.543**	.562**	1
	Sig. (2-tailed)	.000	.250	.000	.196	.128	.075	.000	.002	.002	.003	.031	.002	.001	
	N	30	30	30	30	30	30	30	30	30	30	30	30	30	30

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Table 8. Correlations of motor skills of volleyball players from the cadet category.

Correlations

Kadet – Motorik-Korelacion		MV10M	MV20M	MTPD	MTPK	MKVL	TTEST	TAILL
MV10M	Pearson Correlation	1	.986**	.116	.028	-.855**	.916**	.712**
	Sig. (2-tailed)		.000	.542	.883	.000	.000	.000
	N	30	30	30	30	30	30	30
MV20M	Pearson Correlation	.986**	1	.138	.021	-.879**	.923**	.782**
	Sig. (2-tailed)	.000		.468	.910	.000	.000	.000
	N	30	30	30	30	30	30	30
MTPD	Pearson Correlation	.116	.138	1	.465**	-.061	.219	.227
	Sig. (2-tailed)	.542	.468		.010	.749	.246	.228

	N	30	30	30	30	30	30	30
MTPK	Pearson Correlation	.028	.021	.465**	1	-.157	.015	-.181
	Sig. (2-tailed)	.883	.910	.010		.408	.935	.337
	N	30	30	30	30	30	30	30
MKVL	Pearson Correlation	-.855**	-.879**	-.061	-.157	1	-.783**	-.665**
	Sig. (2-tailed)	.000	.000	.749	.408		.000	.000
	N	30	30	30	30	30	30	30
TTEST	Pearson Correlation	.916**	.923**	.219	.015	-.783**	1	.851**
	Sig. (2-tailed)	.000	.000	.246	.935	.000		.000
	N	30	30	30	30	30	30	30
TAILL	Pearson Correlation	.712**	.782**	.227	-.181	-.665**	.851**	1
	Sig. (2-tailed)	.000	.000	.228	.337	.000	.000	
	N	30	30	30	30	30	30	30

Table 9. Independent sample test of T-Test results of volleyball players of both cadet-junior categories.

Rezultatet e kadeve – (minus) Rezultatet e junioreve		Levene's Test for Equality of Variances		Independent Samples Test t-test for Equality of Means						95% Confidence Interval of the Difference	
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Differ ence	Std. Error Difference		Lower	Upper
APESH A	Equal variances assumed	7.117	.010	-4.007	58	.000	-9.90233	2.47154		-14.84965	-4.95502
	Equal variances not assumed			-4.007	46.635	.000	-9.90233	2.47154		-14.87545	-4.92922
ALART E	Equal variances assumed	5.802	.019	-9.755	58	.000	-15.80000	1.61961		-19.04200	-12.55800
	Equal variances not assumed			-9.755	51.184	.000	-15.80000	1.61961		-19.05122	-12.54878
APGJO K	Equal variances assumed	2.325	.133	-2.835	58	.006	-5.29667	1.86818		-9.03623	-1.55711
	Equal variances not assumed			-2.835	56.483	.006	-5.29667	1.86818		-9.03837	-1.55497

		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
AGJKR	Equal variances assumed	5.544	.022	-9.525	58	.000	-6.96733	.73150	-8.43159	-5.50308
	Equal variances not assumed			-9.525	51.346	.000	-6.96733	.73150	-8.43564	-5.49903
AGJSHD	Equal variances assumed	9.764	.003	-10.199	58	.000	-2.07000	.20296	-2.47626	-1.66374
	Equal variances not assumed			-10.199	46.612	.000	-2.07000	.20296	-2.47838	-1.66162
AGJKE	Equal variances assumed	12.018	.001	-2.549	58	.013	-2.66333	1.04492	-4.75496	-.57170
	Equal variances not assumed			-2.549	42.335	.015	-2.66333	1.04492	-4.77157	-.55510
AIDHLBA	Equal variances assumed	.268	.606	1.243	58	.219	1.72667	1.38861	-1.05294	4.50627
	Equal variances not assumed			1.243	54.072	.219	1.72667	1.38861	-1.05724	4.51058
AIDHSPR	Equal variances assumed	.220	.641	1.257	58	.214	1.52667	1.21500	-.90542	3.95876
	Equal variances not assumed			1.257	53.893	.214	1.52667	1.21500	-.90938	3.96271
AIDHBI	Equal variances assumed	.689	.410	4.047	58	.000	2.94667	.72816	1.48910	4.40423
	Equal variances not assumed			4.047	55.393	.000	2.94667	.72816	1.48764	4.40570
AIDHTR	Equal variances assumed	.262	.611	4.082	58	.000	4.88333	1.19641	2.48847	7.27820
	Equal variances not assumed			4.082	56.712	.000	4.88333	1.19641	2.48731	7.27936

		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
AIDHSHP	Equal variances assumed	.023	.881	.300	58	.766	.33333	1.11258	-1.89374	2.56041
	Equal variances not assumed			.300	57.262	.766	.33333	1.11258	-1.89436	2.56102
AIDHKO	Equal variances assumed	.000	.995	1.507	58	.137	1.94667	1.29215	-.63985	4.53318
	Equal variances not assumed			1.507	56.235	.138	1.94667	1.29215	-.64158	4.53491
AIDHNGJ	Equal variances assumed	.733	.396	.373	58	.711	.40000	1.07365	-1.74914	2.54914
	Equal variances not assumed			.373	57.664	.711	.40000	1.07365	-1.74941	2.54941
BMI	Equal variances assumed	18.476	.000	.791	58	.432	.54667	.69126	-.83704	1.93037
	Equal variances not assumed			.791	41.072	.434	.54667	.69126	-.84929	1.94262
MV10M	Equal variances assumed	.256	.615	.543	58	.589	.02933	.05403	-.07883	.13749
	Equal variances not assumed			.543	56.600	.589	.02933	.05403	-.07889	.13755
MV20M	Equal variances assumed	1.457	.232	1.008	58	.318	.07100	.07046	-.07004	.21204
	Equal variances not assumed			1.008	55.816	.318	.07100	.07046	-.07016	.21216
MTPD	Equal variances assumed	1.456	.232	-4.494	58	.000	-5.83333	1.29799	-8.43155	-3.23512
	Equal variances not assumed			-4.494	56.616	.000	-5.83333	1.29799	-8.43290	-3.23376

		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
MTPK	Equal variances assumed	2.205	.143	-5.892	58	.000	-6.10000	1.03526	-8.17230	-4.02770
	Equal variances not assumed			-5.892	56.371	.000	-6.10000	1.03526	-8.17357	-4.02643
MKVL	Equal variances assumed	.445	.507	-5.828	58	.000	-7.13333	1.22396	-9.58336	-4.68331
	Equal variances not assumed			-5.828	57.226	.000	-7.13333	1.22396	-9.58407	-4.68260
TTEST	Equal variances assumed	.068	.795	2.070	58	.043	.56667	.27377	.01866	1.11467
	Equal variances not assumed			2.070	57.993	.043	.56667	.27377	.01866	1.11467
TAILL	Equal variances assumed	7.584	.008	2.665	58	.010	.87767	.32934	.21842	1.53692
	Equal variances not assumed			2.665	48.157	.010	.87767	.32934	.21554	1.53980

Conclusions

Success in the sport of volleyball certainly depends on the morphological characteristics of elite volleyball players, the main of which are height and body mass, which are evaluated taking into account the current age of volleyball players. Observed from the aspect of selection and in function of the anthropometric space, the best volleyball players should be of above average height and with morphological characteristics that provide them with above average speed and explosive motor potential. As in any sports activity, as well as in volleyball, no technical element can be performed without adequate motor skills and cannot be fully expressed without a technique of rational movement execution. For this reason, the union of motor skills is looked at, respectively the mutual effect of motor skills and motor habits, so it is unthinkable to talk about the development and improvement of motor skills isolated from the development and improvement of motor skills.

In addition to these skills, others are extremely important, such as dexterity, speed, reactivity, agility, hand-speed skills, especially when hitting the ball during a jump shot or while serving, and quick response after a block. of the rival team. The optimal choice of exercises certainly depends on the age of the volleyball player, the frequency of weekly training sessions and the organization of the competition period. But regardless of this, research shows that motor skills

must be developed much earlier, before puberty. Since the purpose of this paper is to present the difference between volleyball players of two different categories, in terms of anthropometric parameters and some motor skills, obviously the obtained results offer us valuable data. This research will present an added value in the field of volleyball, which will serve not only for the various authors but also for researchers and young students.

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