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THE DIFFERENCES IN SOME MOTOR SKILLS AMONG STUDENTS INVOLVED IN KARATE AND FOOTBALL

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Abstract

In theory and practice of every sport, and therefore also in the sport of Karate there are certain rules that must be respected in order to meet the desired goals. As a very important rule in the sport of karate is to start the physical exercising at the youngest age possible in order to stimulate the development of those motor skills which are specific to the sport.

As for its implementation, this study has a transversal empirical character, which means that the measurements of the motor skills are done over a specific time period. The sample was defined as students of the age of 12 from the Middle School "Selami Hallaqi" Gjilan. In this research have been included 90 students, or two groups with 45 students each. The first group is consisted of students who except for the regular two hours per week of physical education classes have also exercised the sport of karate two more times a week, an hour a day. While, the second group is consisted of a student who besides the regular two times a week of physical education have also exercised football two more times, one hour per day. Measurements were made at the end of the school year. 9 motor variables were applied (Kurelić et al. 1975), running in 20 meters (MT20V), long jump from the place (MSKDM), high jump from the place (MSKVM), hand tapping (MTRUK), leg walk (MTNOG), eight with bowing(MOSPR), running sideways (mtrs) bowing ahead in the bank (MFLPRK), legs spread sideways-retaliation (MFLSP). For the processing of the result it was applied the analysis of t-test for independent samples.

The basic statistical parameters of the results obtained in the two groups involved in the research show that the values obtained do not have an outlined asymmetry and incline to the lowest ones (hypo cortical). Analysis of the t-test for independent sample obtained shows that differences in all variables between groups were statistically significant.

The changes obtained from the students involved in karate section show that specific exercises applied in the training of karate have helped to improve the motor tasks to a large extent, which is confirmed by a statistically significant difference between young karate sportsman and footballers ($p < 0.001$). These results suggest that different educational technologies and through

applying different training methods can be achieved different effects on motor latent space, which are confirmed in the research Šekeljč and Stamatovic, (2010).

Keywords: Students, Motor skills, Karate, Football,

INTRODUCTION

The care for an optimal growth and development of the children before the stage of puberty is a priority task. In order for this process to be developed in the right way it should always be taken into consideration the interaction of various anthropological dimensions and their integral development. The action of diverse kinesiology incentives and others, inevitably leads to a greater or smaller impacts in latent dimensions of anthropological system of children, both in quantitative as well as in qualitative terms (Breckenridge and Vicent, 1960; Ma & Qu, 2017).

The kinesiology anthropological dimensions are anthropological dimensions which are particularly interesting in the transformative process such as morphological characteristics, motor and functional skills, and motor knowledge. In addition to changes in latent dimensions, according to the theory of integrated development (Ismail, A.H., 1976), there should also be achieved the changes in their mutual relations. During the growth and development of the child constant anthropological dimensions are intertwined and recharged. The interaction of several features and capabilities are responsible for the child's development, both in the physical sense but also in terms of the intelligentsia, emotional and social.

A very small representation or a complete lack of motor activities thereof during growth and development of children cannot be compensated later. The impact of motor stimulants in children during growth and maturity gradually weakens. Insufficient number of motor incentives and opportunities to participate in motor activities can slow the motor skills development as well as those of the child's intellectual (Findak et al., 1992)

Such researches in the field of sport are important to gather as much information as possible on the ways of the development of motor skills which are responsible for success in most sports.

The purpose of this paper is the confirmation of differences in some motor skills among students involved in karate section and football. Confirmation of this difference represents a particular importance in theoretical and practical filed for teachers and coaches of karate in increasing the knowledge and doing a more qualitative work.

MATERIAL & METHOD

The sample of the entity consists of 12 years old students from the Elementary Middle School "Selami Hallaqi" Gjilan. In this study are included a total of 90 students, that is, two groups of 45 students. The first group comprised of students who besides regular hours of physical education that is 2 times a week, they also exercised in the sport of karate twice more times a week by one hour per day. The second group comprised of students who besides the regular hours of physical education that is 2 times a week, they also exercised in the sport of football twice more times a week by one hour. Measurements were made at the end of the school year.

For the evaluation of motor skills, there are taken nine variables that cover the latent space of energetic and motor processes of the students in the section of karate and football.

Motor variables applied:

1. Running in 20 meters (MT20V)
2. Long jump from the place (MSKDM)
3. High jump from the place (MSKVM)
4. Hand tapping (MTRUK)
5. Walk tapping (MTNOG)
6. Eights with bowing (MOSPR)
7. Running sideways (MTRS)
8. Bowing ahead in the bank (MFLPRK)
9. Legs sideways-retaliation (MFLSP).

The data collection was analyzed by mathematical statistical package; SPSS program, version 23.0 of Windows. To determine the level of state transformation was used the T - test for independent variables that make it possible to test the difference between the arithmetic averages of students involved in karate and football section.

RESULTS

The results of the basic descriptive statistical parameters and the distribution, in the case of students engaged in karate (Table 1), The results of Running at 20 show that the minimum is 3.37 seconds. , maximal is 5.50 seconds. and the average and standard deviations are (mean±SD) 4.14±0.48. Long jump from the place minimum is 127.00 , maximum is 187.00 and the average and standard deviations are 165.42±14.10. High jump from the place minimum is 24.00 cm, maximum is 46.20, while the average and standard deviations are 34.15±5.10. Hand taping, minimum is 25.00 , maximum is 38.00, the average and standard deviations are 32.40±3.60. Walk taping, minimum is 18.00, maximum is 28.00, the average and standard deviations are 23.31±2.41. Running sideways minimum is 8.47 , maximum is 12.03, the average and standard deviations are 10.12±0.72. Bowing ahead in the bank the minimum is 16.00, maximum is 41.00, the average and standard deviations are 29.17±5.67. Legs sideways-retaliation minimum is 112.00, maximum is 154.00, the average and standard deviations are 135.60±11.23. Based on the values of skew news asymmetry (Skew) and the coefficient of the curve of distribution (Kurt.) of the variables applied, it was proved that there is a pronounced asymmetry. In the majority of variables (6 variables), the asymmetry coefficients indicate that their arithmetic averages incline lower results and the results of most the variables incline to higher ones.

Table 1. Basic statistical parameters of motor variables of karate sportsmen

Variables	N	Min	Max	Mean±SD	Skew	Kurt
Running in 20 meters	45	3.37	5.50	4.14±0.48	.545	.190
Long jump from the place	45	127.00	187.00	165.42±14.10	-.467	-.187
High jump from the place	45	24.00	46.20	34.15±5.10	-.084	-.424
Hand taping	45	25.00	38.00	32.40±3.60	-.614	-.794
Walk taping	45	18.00	28.00	23.31±2.41	-.068	-.286
Eights with bowing	45	12.30	14.86	13.25±0.62	.907	.180
Running sideways	45	8.47	12.03	10.12±0.72	.176	.189
Bowing ahead in the bank	45	16.00	41.00	29.17±5.67	-.296	-.039
Legs sideways-retaliation	45	112.00	154.00	135.60±11.23	-.456	-.595

Upon inspection of the basic descriptive statistical parameters and the distribution, in the case of the students involved in football (Table 2). The results of Running at 20 show that the minimum is 3.67 seconds, maximal is 5.80 seconds, and the average and standard deviations are (mean±SD) 4.44±0.48. Long jump from the place minimum is 107.00, maximum is 169.00 and the average and standard deviations are 145.02±14.35. High jump from the place minimum is 18.00 cm, maximum is 40.20, while the average and standard deviations are 28.06±5.41. Hand taping, minimum is 20.00, maximum is 33.00, the average and standard deviations are 27.17±3.77. Walk taping, minimum is 15.00, maximum is 25.00, the average and standard deviations are 20.22±2.42. Running sideways minimum is 8.86, maximum is 12.43, the average and standard deviations are 10.55±0.71. Bowing ahead in the bank the minimum is 3.00, maximum is 28.00, the average and standard deviations are 16.35±5.16. Legs sideways-retaliation minimum is 93.00, maximum is 117.00, the average and standard deviations are 117.82±11.19. Based on the values of skewness asymmetry (Skew) and the coefficient of the curve of distribution coefficients (Kurt.) of the variables applied, it was proved that there is a pronounced asymmetry. In the majority of variables (5 variables), the coefficient of asymmetry indicate that

their arithmetic averages lean towards higher scores and the results of most of the variables most incline to the lowest.

Table 2. Basic statistical parameters of motor variables of footballers

Variables	N	Min	Max	Mean±SD	Skew	Kurt
Running in 20 meters	45	3.67	5.80	4.44±0.48	.691	.237
Long jump from the place	45	107.00	169.00	145.02±14.35	-.435	-.278
High jump from the place	45	18.00	40.20	28.06±5.41	.129	.655
Hand taping	45	20.00	33.00	27.17±3.77	-.453	-1.098
Walk taping	45	15.00	25.00	20.22±2.42	-.313	.054
Eights with bowing	45	13.00	15.56	14.00±0.64	.691	-.212
Running sideways	45	8.86	12.43	10.55±0.71	.090	.264
Bowing ahead in the bank	45	3.00	28.00	16.35±5.16	-.201	.127
Legs sideways-retaliation	45	93.00	140.00	117.82±11.19	.575	.206

In order to determine whether there is a significant statistical difference between young karate sportsmen and footballers of the age of 12 years in nine motor variables, was applied the T-test for independent variables for two independent groups (Table 3). Results obtained are as follows: Differences between the 45 students involved in karate section and 45 students involved in the football section in the execution of motor variables are statistically significant in all the motor variables applied: Running in 20 meters, fast start, M. Differ.-0.304; t-2.968; df-88; sig. 0.004; Long jump from the place, M. Differ.-20.400; t-6.799; df-88; sig. 0.000; Long jump from the place, M. Differ. 6.088; t. 5.487; df-88; sig. 0.000); Manual taping, M. Differ.-5.222; t-6.710; df-88; sig. 0.000; Walk taping, M. Differ.-3.089; t. 6,066; df-88; sig. 0.000; Eights with bowing, M. Differ.-0.756; t-5.646; df-88; sig. -0.000; Sideways running , M. Differ. 0.426; t. 2.785; df-88; sig. 0.007; Bowing ahead in the bank, M. Differ.12.822; t. 11.209; df-88; sig. 0.000; Legs spread sideways-retaliation, M. Differ.17.778; t. 7.518; df-88; sig. 0.000.

Table 3. Differences in the arithmetic average of the motor variables among footballers, karate sportsmen and young footballers.

Variables	F	t	df	Sig.	M. Differ.	Lower	Upper
Running in 20 meters	.000	-2.968	88	.004	-.304	-.507	-.100
Long jump from the place	.006	6.799	88	.000	20.400	14.437	26.362
High jump from the place	.193	5.487	88	.000	6.088	3.883	8.294
Hand taping	.192	6.710	88	.000	5.222	3.675	6.768
Walk taping	.004	6.066	88	.000	3.089	2.076	4.100
Eights with bowing	.063	-5.646	88	.000	-.756	-1.016	-.487
Running sideways	.048	-2.785	88	.007	-.426	-.725	-.121
Bowing ahead in the bank	.414	11.209	88	.000	12.822	10.548	15.095
Legs sideways-retaliation	.014	7.518	88	.000	17.778	13.078	22.477

DISCUSSION

In the case of students involved in karate section, changes obtained show that specific exercises applied in training in karate have helped to improve the execution of motor tasks to a large extent. The one year training in football was probably more focused on learning and improving technical and tactical elements in football than the karate sportsmen who have worked more on the effectiveness of certain methods of training and preparation programs for specific conditional (Ma & Qu, 2017).

Changes in these motor variables show that the quality and volume of work in conditional preparation of young athletes in this age is important because it is the best time to develop motor skills for responsible variability which are: a mechanism for regulating the intensity the excitement, regulating the tone and synergy and a mechanism for structuring movements.

The results obtained show that the exercises applied to karate sportsmen during the training sessions have significant impact on the development of those physical skills that are important basis for achieving results in any sport. These results suggest that different educational technologies, applying different training methods can achieve different effects on motor latent

space, which are confirmed in the research (Arunovic., 1978; Lorger & Kunješić., 2014; Šekeljč & Stamatovic., 2010).

In a sample of 45 male students involved Karate and 45 male students involved in the football section, aged 12 ± 0.6 years old, has been applied a battery of 9 motor tests that cover the structure of some motor skills.

After the implementation of certain statistical procedures has proven that included groups of students (divided into sections sports) after treatment in experimental research conducted, differs significantly in all motor skills applied. This means that according to the t-test was obtained in a statistically significant difference in arithmetical average between students involved in karate section and students involved in the football section of all motor variables applied.

Specific exercises in certain sports influence the development of those anthropologist characteristics and skills that are responsible for the success in the sport. We can conclude that in the sport of Karate it is important to start with physical exercises at the youngest possible age in order to stimulate the development of those motor skills which are specific to the sport.

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