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DIFFERENCES BETWEEN PUPILS FROM URBAN AND RURAL AREAS IN MORPHOLOGICAL AND MOTORIC DEVELOPMENT

Introduction

One of the most important preconditions for effective influence of physical exercises on pupils during ordinary sport education classes in the schools is increase of volume and quality of performance. In order to increase the volume and quality of learning and activities it is necessary to implement reforms in primary and secondary lower education system in Kosova toward advancement of staff and increase of number of teaching hours for sports and health education.

In different countries diverse programs and strategies are developed for organization of sport activities for youth. A hallmark example is England where from 2002 government has demonstrated clear commitment for developing partnership between body development education and sports and has committed investing 459 million pounds for physical education in schools and other developmental initiatives related to sport and thus dedicated 750 million pounds for development of supporting infrastructure. Reasons for lack of investments are diverse and they are founded on learning about the health condition of the nation, obesity, sitting life style and high rate of absence of sport activities. Government policy has made a strong echo in professional circles due to making strong links between body development and sports that is overcoming historical dualism between these two areas of human activity (Donovan et al. 2006).

Education system in the USA is to a large extent different from European system, and it is especially different from Kosova system. Differences are visible in all areas of school education and they are especially visible in upbringing and education of body and health culture in sports in the schools. In American state or private school one of the significant area is sport, which has significant place also in religious schools, for example in catholic secondary schools where religion is main subject. In this way the popularity of students among peers and professors is mostly determined based on achievements in sport. Also the reputation and popularity of schools grows with sport successes of its pupils. Good sport school draws attention of sponsors and this is increasing possibility for increased sports achievements (Đonlić, 2008).

Sport besides preserving health, creation of work and defense capabilities has also significant social role. This role is primarily directed toward upbringing and education values. Sport has significant role for formation of personality. Sport enables children to develop human qualities and transfers authentic human values (Đonlić, 2005).

In Kosova there is a big difference between urban and rural areas in connection with conditions for sport education and realization of curricula. Lack of infrastructure for sport, decreased hours for sport (only two per week), lack of physical activities outside of

school in rural areas is an important factor for physical and motoric development that presents disadvantageous environment compared to pupils in urban areas.

Methods

This research is of transversal nature, meaning that there is measurement of anthropometric and motoric indicators in the sample of 26 students of 15 years age group from primary and lower level secondary school from urban center and the sample of 30 pupils from primary and lower level secondary school from rural area. Measurements were done at the beginning of school year. Six anthropometric and four motoric variables were applied (Kurelić et al., 1975).

Anthropometric variables:

- Body height (ATV),
- Foot length (ADS),
- Body mass (ATT),
- Volume of upper arm at relaxed position (AONL),
- Volume of upper leg (AONK).
- Volume of lower leg (AOPK).

Motoric variables:

- Standing long jump (MESDM),
- 30 meter distance running (MTR30V),
- Benching (MFLPRK), i
- Push-ups (MSKLEK).

For data analysis T-test for dependent sample was applied.

Results

Basic statistical parameters and parameters of distribution in the group of pupils from school in urban center that took part in this research are presented in table number 1. Starting from values of asymmetry (Skew) and coefficient of distribution curve (Kurt.) of applied variable, it was confirmed that there is no significant asymmetry. In majority of variables coefficient of asymmetry is positive (epikurtic) meaning that their arithmetic mean tends toward higher results and that majority of results of their variables tend toward lower values. Two anthropometric and one motoric variable are hipokurtic meaning that their mean arithmetic has lower values compared to majority that tend to higher values.

Through analysis of the basic descriptive statistical parameters and parameters of distribution in the group of pupils from school in rural environment that took part in this research as represented in table 2. It can be seen in the table that all applied motoric variables have normal distribution of results. Based on the values of asymmetry of skewness (Skew) and coefficient of distribution curve (Kurt.) of applied variable it was determined that there is no significant asymmetry. In majority of variables (7 variables) asymmetry coefficient indicates that their arithmetic mean tends toward higher results and majority of variable results tend toward lower values. In this table two anthropometric variables and one motoric are hipokurtic (negative) meaning that their arithmetic mean have lower values and majority of results of these variables tend toward higher values.

Table 1. Basic statistical parameters of motoric variables at the beginning for the group of pupils from school in urban area

	N	Min	Max	Mean	Std. Dev	Skew	Kurt
ATV	26	157.00	184.00	171.6692	8.86064	-.186	-1.019
ADS	26	24.00	30.00	26.7308	1.59519	.535	.002
ATT	26	44.50	93.00	63.7308	15.54042	.696	-.656
AONL	26	20.50	30.00	24.9231	3.15497	-.017	-1.326
AONK	26	44.50	63.00	52.2692	5.88087	.625	-.468
AOPK	26	30.00	42.00	35.3077	3.54140	.474	-.674
MESDM	26	160.00	230.00	195.8462	22.08654	-.024	-.920
MTR30V	26	4.84	5.75	5.2562	.26295	.353	-.376
MFLPRK	26	10.00	71.00	38.0769	18.92918	.104	-1.218
MSKLEK	26	9.00	40.00	21.9231	11.28866	.682	-1.222

Table 2. Basic statistical parameters of motoric variables at the beginning in the school group from school in rural area

	N	Min	Max	Mean	Std. Dev	Skew	Kurt
ATV	30	156.00	183.00	169.0400	6.86448	.162	.027
ADS	30	24.00	27.00	25.6667	.86436	-.127	-.680
ATT	30	51.00	96.00	67.5400	12.99283	.785	-.245
AONL	30	21.00	31.00	26.2133	2.93630	.014	-.891
AONK	30	46.50	67.50	55.9000	7.01771	.134	-1.269
AOPK	30	32.00	42.80	37.3800	3.48221	-.106	-1.427
MESDM	30	120.00	255.00	184.4000	38.12285	.034	-.655
MTR30V	30	4.83	6.78	5.6940	.58802	.608	-.747
MFLPRK	30	10.00	53.00	36.0000	12.56706	-.673	-.137
MSKLEK	30	4.00	35.00	15.6000	10.50977	.446	-1.235

Third table contains all data related to T-test for independent sample. For each variable, primarily results with assumption of equality of group variance, and secondly inequality of variance.

In first two columns results of Leven's test of equality of variance its value (F) and significance (sig) are presented. In remaining columns of the table are results of testing equality of arithmetic mean of two groups: value of T-test (t), number of freedom degree (df), significance of two way testing of differences of arithmetic means (2-tailed), difference of arithmetic mean (mean difference), standard error difference (Std. Error difference), limits of upper and lower interval and differences of confidence from 95% (95% Confidence Interval Of the. of the difference –Lower, Uper).

Table 3. Test of arithmetic mean difference of independent sample

	F	Sig.	T	Df	Sig. (2-tailed)	Mean Diff.	Std. Err. Diff.	Lower	Upper
ATV	2.586	.114	1.250	54	.217	2.62923	2.10390	-1.58884	6.84730
			1.227	46.846	.226	2.62923	2.14251	-1.68132	6.93978
ADS	5.741	.020	3.160	54	.003	1.06410	.33673	.38900	1.73920
			3.037	37.262	.004	1.06410	.35039	.35431	1.77389
ATT	.620	.434	-9.99	54	.322	-3.80923	3.81262	-11.45308	3.83461
			-.986	48.972	.329	-3.80923	3.86209	-11.57051	3.95205
AONL	.652	.423	-1.584	54	.119	-1.29026	.81442	-2.92307	.34256
			-1.576	51.570	.121	-1.29026	.81868	-2.93338	.35287
AONK	1.773	.189	-2.080	54	.042	-3.63077	1.74596	-7.13121	-.13033
			-2.106	53.949	.040	-3.63077	1.72389	-7.08703	-.17451
AOPK	.307	.582	-2.204	54	.032	-2.07231	.94042	-3.95773	-.18688
			-2.201	52.607	.032	-2.07231	.94157	-3.96119	-.18342
MESDM	8.245	.006	1.347	54	.184	11.44615	8.50002	-5.59536	28.48767
			1.396	47.541	.169	11.44615	8.19800	-5.04114	27.93345
MTR30V	17.413	.000	-3.502	54	.001	-.43785	.12502	-.68849	-.18720
			-3.676	41.372	.001	-.43785	.11910	-.67831	-.19738
MFLPRK	11.350	.001	.490	54	.626	2.07692	4.24253	-6.42883	10.58268
			.476	42.412	.637	2.07692	4.36413	-6.72772	10.88157
MSKLEK	.202	.655	2.170	54	.034	6.32308	2.91453	.47981	12.16635
			2.158	51.577	.036	6.32308	2.92970	.44306	12.20310

Results obtained indicated that pupils from urban environment and pupils from rural environment have statistically significant differences in anthropometric variables such as the length of foot/sole (ADS) of $p < 0.003$, whereas pupils from urban area have better longitudinal parameters while the value of perimeter of upper leg (AONK) is $p < 0.042$, and perimeter of volume of lower leg (AOPK) is $p < 0.003$ indicating that pupils from rural areas have higher body mass. Pupils from urban areas have better results in all motoric tests, especially the test of high start 30 meter running (MTR30V) with $p < 0.001$ and push-ups (MSKLEK) with $p < 0.036$. Differences between children from urban and rural areas in the physical development as well as motoric, begs a question of factors in the environment that influence pupils from rural area to have lower results. Maybe it is not all up to conditions for implementation of physical education in the school. The role of parents in times of big social and economic changes is significant.

Involvement of children in sport activities today is dedicated more to parents than to children. While in the past children were dealing with body activities in their yard and open play grounds, social changes and fear by parents for safety of their kids have resulted in bigger involvement of children in organized indoor clubs and activities. In this

way from an informal game sport has gained a completely new character of activity supervised by parents. Besides their presence, parents get involved through their expectation and pressure on kids. However, if child is not successful in what he/she is doing it will need help and not expect too much just because they are exercising every day (Halpern, 2003). Experience of success and personal effectiveness are elements for developing an image of ourselves and prevention of undesired forms of behavior (Wigfield, 1992). Results indicate that promoting healthy life style among youth gains importance with the insight gained by Paavola and sur. (2004.) which emphasizes positive correlation between regular sport activities and correct nutrition habits.

Discussion

In order to determine difference between pupils from urban and rural areas in anthropometric and motoric development, this research was implemented at the sample of 26 male pupils from urban area and 30 male pupils from rural area, all aged 15 years. Measurement of physical development has been carried out using 6 variables that cover longitudinal dimensions and mass dimension and body size, while motoric skills were valued with 4 motoric tests. After implementation of specified statistical procedures it was determined that in the group of urban and rural area there is a significant statistical difference in some anthropometric and motoric variables. Pupils from urban areas have higher longitudinal anthropometric parameters and lower body mass. When it comes to motoric skills pupils from urban areas have better results. Lack of infrastructure for sport, lack of physical activities outside of school and also maybe social issues are considerable factors for physical body development and motoric which for children in rural areas are not favorable compared to pupil from urban areas.

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DIFFERENCES BETWEEN PUPILS FROM URBAN AND RURAL AREAS IN MORPHOLOGICAL AND MOTORIC DEVELOPMENT

One of the most important preconditions for effective influence of physical body exercises among pupils during regular classes of physical education in schools is increased volume and quality of work and study. In order to increase volume and quality of work and study, it is necessary to carry out reform of education at elementary and lower level secondary education in Kosova in order to advance professional personnel and increase number of hours for sport and health education classes. Methods: This research is of a transversal nature, meaning that there has been a measurement of morphological and motoric indicators in the sample of 26 pupils of the age group of 15 years of the elementary and lower level school "Faik Konica" from Prishtina as an urbane center and sample of 30 pupils of elementary and lower level school „Avdulla Tahiri“ from Malisheva. 6 anthropometric and 4 motoric variables have been used (Kurelić et al., 1975). Anthropometric variables included: body height (ATV), length of foot (ADS), body mass (ATT), volume of upper arm in down position (AONL), volume of upper leg (AONK), volume of lower leg (AOPK). Motoric variables included: standing position distance jump (MFESDM), 30 meters distance running (MTR30V), bench bending (MFLPRK), and push-ups (MSKLEK). T-test analysis has been used for independent variables. Results: Obtained results from the statistical analysis demonstrate that anthropometric characteristics and motoric skills of two independent groups of pupils have normal distribution and no visible asymmetry and have tendency toward higher values (epikurtic). T-test analysis demonstrates that pupils from rural areas have lower muscular mass and lower motoric results. Discussion: Conditions for execution of physical education classes and lack of physical activities in the rural environment have strong influence on developments of morphological and motoric characteristics of pupils. Significant statistical differences obtained in these groups demonstrate that pupils in the elementary and lower level secondary education school „Avdulla Tahiri“ from Malisheva have lower muscular mass and motoric abilities at the level $p < 0.05$, due to economic and social conditions. Results indicate that promotion of healthy life style among adolescents has even greater importance due to insight gained by Paavola and sur. (2004.), that underlines positive correlation between regular sports and recreational activities and correct nutrition habits.