

DIFFERENCES IN SOME ANTHROPOMETRIC CHARACTERISTICS AND MOTOR SKILLS BETWEEN STUDENTS OF FACULTY OF PHYSICAL EDUCATION AND SPORTS OF UNIVERSITY OF PRISHTINA AND AAB COLLEGE

Blerta Abazi¹, Armend Xhemajli², Flora Halilaj³, Fatmir Pireva²

¹ *Faculty of Physical Education, University of Tetova, PhD student, RNM*

² *Faculty of Physical Education and Sports, AAB College, Prishtina, Kosovo*

³ *Primary and Lower Secondary School '7 Shtatori' Bëgracë, Kaçanik, Kosovo*

*Corresponding author e-mail: blerta.abazi@unite.edu.mk

Abstract

Purpose: The main purpose, in this research, is to ascertain if there are significant differences in some anthropometric characteristics and motor skills between the selection of two University Institutions, between Public and Private Institution, of the same profile, namely the branch of Physical Education and Sports of the University of Prishtina and that AAB College.

Methodology: This research has included 221 male students with an average age of 19.49, of them 150 students from the University of Prishtina, and 71 students from the AAB College from Faculty of Physical Education and Sports.

Conclusion: The research conducted by means of discriminative analysis, namely T-test for independent groups, has led to the conclusion that, from the anthropometric characteristics, there were significant differences in tests determining the mass and volume factor, and transversal factor. Discriminative analysis, namely T-test for independent groups from the use of motor skills, provides us with data that there were statistically important differences in all motor tests applied in the favour of students of the University of Prishtina with significance sig.=.000.

Keywords: Students, anthropometry, motoric, skills.

Introduction

The high level of physical activity is an indicator of a healthy future. An important challenge for the Physical Education is the promotion of regular and permanent exercise for a healthy lifestyle. Regular participation in physical activity is accompanied by significant short and long-term health benefits for students in physical, cognitive, emotional and social fields (Sallis, Prochaska & Taylor, 2000; Yang, Telama, Viikari & Raitakari, 2006).

Motor skills and anthropological characteristics play an important role in the success of student's sports performance.

Monitoring and diagnosis of students' anthropometric characteristics and motor skills is the foundation from which the procedures for determining the situation, goals and tasks, as well as the planning and programming process of the exercise derive (Samson et al. 2000; Maaros, Landor, 2001; Rousanoglou et al., 2008).

Anthropometric characteristics and motor skills have undoubtedly a significant influence on determining the psychosomatic human status. The level of development of anthropometric characteristics and motor skills play an important and unique role in the process of human growth and development (Kondriç, Mišigoj-Duraković and Metikoš, 2002).

The main purpose, in this research, is to ascertain if there are significant differences in some anthropometric characteristics and motor skills between the selection of two University Institutions, between Public and Private Institution, of the same profile, namely the branch of Physical Education and Sports of the University of Prishtina and that AAB College.

Methods

Participants

Subject - The data sample has included 221 male subjects, divided into two sub-samples/groups. The first group included (no.=150) male students with an average age of 19.49, students from the University of Prishtina - while the second group included (no. = 75) male students with an average age of 19.49, students from the Faculty of Physical Education and Sports in AAB College. Ten variables were tested in the anthropometry research technique, designated as: skeleton length or transverse dimension, body volume and body mass: body height, arm length, arm circumference, calf circumference, body mass, arm skinfold, back skinfold, abdomen skinfold, calf skinfold.

While five motor variables were tested in the motor variables, namely: foot plate tapping, arm plate tapping, standing broad jump, bent arm hang, and pull up test.

Measurements

Anthropometric measurements were taken according to standard methodology of International Society for the Advancement in Kinanthropometry (ISAK). Weight was measured in underwear and without shoes with a medical decimal weight scale, to the nearest 0.1 kg, and height was measured barefoot in the Frankfort horizontal plane with a telescopic height measuring instrument (Martin's anthropometer) to the nearest 0.1 cm. In order to ensure that the results obtained from the measurement, i.e. the assessment of the body composition are as accurate as possible and precise before each measurement the precondition that recommends ACSM (2005) and Heyward (2006) were fulfilled.

Motor test: Foot plate tapping, hand plate tapping, standing broad jump, forceful stay on the iron were executed in line with the Eurofit test according to recommendations of the Council of Europe, (Eurofit for adults book: Assessment of Health Related Fitness, Council of Europe Publishing.

Statistical methods

Descriptive statistics are used for calculation of the results for both groups of subjects; arithmetic average, minimum and maximum score, standard deviation, skewness, kurtosis and Kolmogorov-Smirnov test for distribution normality for each variable using the software package SPSS 20.0

While in order to differentiate the motor skills between the students of Physical Education of the University of Prishtina and the AAB College the t-test method analysis was used to determine the differences between the two groups of students.

Results

Table 1 shows the results of the t-test of Anthropometric Characteristics between the students of FEFS and AAB College, also the Physical Culture and Sports course. In the basic statistical parameters, through the T-test analysis, we tested the sample of 221 students, out of whom 150 were from FEFS and 71 from AAB College.

Table 1. T-Test for independent groups' Motor skills FEFS and AAB

Variables	ID	N	Mean	Std. Dev.	t	df	Sig.	Mean Diff.
Foot plate tapping	FEFS	150	29.02	2.927	4.854	215	.000	2.214
	AAB	67	26.81	3.47	4.550	109.735	.000	2.214
Hand plate tapping	FEFS	150	34.92	4.687	-3.421	215	.001	-2.423
	AAB	67	37.34	5.110	-3.310	117.574	.001	-2.423
Long jump	FEFS	150	237.57	16.897	8.594	215	.000	24.298
	AAB	67	213.27	23.693	7.578	97.172	.000	24.298
Standing broad jump	FEFS	150	53.50	18.544	6.668	215	.000	16.889
	AAB	67	36.61	13.839	7.441	166.789	.000	16.889
Pull up	FEFS	150	12.61	5.052	4.089	215	.000	2.763
	AAB	67	9.85	3.354	4.751	183.903	.000	2.763

FEFS-(Faculty of Physical Education and Sports) AAB-(AAB College – Physical Education)

In table 1 statistical data show that the group of students of the University of Prishtina had better results compared to AAB college students, but not with a valid statistical significance 001. The foot plate tapping variable had a difference, but with not a valid statistical significance, average being 29.02 for FEFS students and 26.81 for AAB College students. While AAB College students in Hand plate tapping test showed a better result, with an average of 37.34 with a frequency of 15 seconds, compared with students of the University of Prishtina, with an average of 34.92.

Table 2. T-Test for independent groups in anthropometric variables FEFS and AAB

Variables	ID	N	Mean	Std. Dev.	t	df	Sig.	Mean Diff.
Body height (cm)	FEFS	150	178.68	6.811	1.033	219	.303	1.013
	AAB	71	177.67	6.796	1.034	137.747	.303	1.013
Arm length (cm)	FEFS	150	77.98	3.789	-.723	219	.470	-.449
	AAB	71	78.43	5.259	-.645	105.640	.520	-.449
Arm circumference (cm)	FEFS	150	33.08	2.681	7.213	219	.000	3.117
	AAB	71	29.96	3.584	6.515	108.439	.000	3.117
Calf circumference (cm)	FEFS	150	36.59	2.238	-1.787	219	.075	-.649
	AAB	71	37.24	3.037	-1.606	107.278	.111	-.649
Body weight (kg)	FEFS	150	73.90	7.730	2.564	219	.011	3.115
	AAB	71	70.78	9.771	2.360	112.965	.020	3.115
Arm skinfold (mm)	FEFS	150	6.92	2.791	-.120	219	.904	-.048
	AAB	71	6.97	2.818	-.120	136.294	.905	-.048
Back skinfold (mm)	FEFS	150	9.31	2.827	2.449	219	.015	.947
	AAB	71	8.36	2.351	2.615	162.799	.010	.947
Abdomen skinfold (mm)	FEFS	150	7.54	3.645	-3.282	219	.001	-1.741
	AAB	71	9.28	3.763	-3.245	133.613	.001	-1.741
Calf skinfold (mm)	FEFS	150	5.71	2.662	-6.383	219	.000	-2.682
	AAB	71	8.39	3.397	-5.856	112.160	.000	-2.682

FEFS-(Faculty of Education and Sports) AAB-(AAB College – Physical Education) UP-(University of Prishtina)

Discussion

In relation to the results obtained, we have ascertained that there are differences between the two University Institutions, that of FEFS-AAB and FEFS-UP in the motor and anthropological area in the favour of FEFS. Starting from the anthropological area, the anthropometric results processed through the T-test method analysis have shown that there are differences in some variables in the anthropometric characteristics in the favour of FEFS-UP: the variable – arm circumference, (33.08) -UP and (29.96) – AAB, abdomen skinfold (7.54) -UP with (9.28) AAB and calf skinfold (5.71) -UP with (8.39) -AAB. While in favour of AAB College students was a variable: body weight (73.90) -UP and (70.78) -AAB. Similar results have been yielded by many studies, showing that the level of anthropological characteristics has been affected by various factors including: environmental factors (Malina, Peña Reyes & Little, 2008), lifestyle, diet customs (Hebbelinc, Clarys, & De Malsche, 1999), cultural differences and socio-economic status (Freitas et al.2007).

Whereas concerning motor variables, valid statistic results have been obtained in some variables; in favour of AAB College students was a variable; hand plate tapping with an average (37.34), compared with FEFS -UP with a score (34.92), while other motor tests were in favour of FEFS-UP. Similar results have been also shown by some other research, (Srna Jenko Miholić, Ivan Prskalo, Vatroslav Horvat, 2008).

The motor results presented in favour of FEFS-UP are justified by the fact that the FEFS-UP students, other than the curriculum they attend, are more active outside of the curriculum, oriented in different sports, which has impacted on the higher physical preparation to FEFS-UP

students. Intensive after-learning programmes can yield significant and sustained improvements in students' motor skills. (Matvienko & Ahrabi-Fard, 2010).

Conclusion

Considering the purpose of the research and the objective of this paper, which was the confirmation of the differences between the students of both institutions of Physical Education from AAB College and UP, we can stylistically conclude that the results obtained have shown that there are differences in anthropometric characteristics, but not with a valid significance. Based on the summary of the results, we have come to the conclusion that the data results of the motor skills were influenced by the selection of students, since the two groups of students were in the first year of their studies, the selection means that students in FEFS are subject to the admission examination where the best are selected, i.e., students are preliminary prepared for the practical part, whereas students in AAB are not subject to the admission examination, i.e., there is no student selection, the desire to enroll is attainable for everyone without any criteria.

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