STUDY ON DETERMINING THE MOTOR POTENTIAL AT YOUNG AGE PETROLEUM AND GAS UNIVERSITY OF PLOIEȘTI

Marius VAIDA

Abstract: Increasing the biological potential of an idividual in accordance with the changing social requirements is one of the main factors that have as a goal the maintenance of healthy young people as well as the reduction of state expenses in the health industries by improving the population's health indicators. This study aims to highlight the importance of physical education at the age of the young adult or late teenager and was conducted over a university year on a sample of 50 students. Two tests were conducted, one at the beginning of the academic year and the other at the end of the academic year. In thisstudy, strengthresistance of upper limb muscles(push-up), abdominal muscular strength(lifting the legs extended from hanging position), strength of the back muscles(trunk extension of the ventral-30"), explosive force of the inferior limbs muscles (squatting, vertical jump, and longjump), but alsothespeedrunning(50m start-uprunning).From the data, we can conclude that the motric potential of the young generation is likely to be improved by means of physical education adapted to each individual, the real knowledge of this potential being the basis for starting out in specific training. The development of the motoric potential is also related to the strengthening of the health of individuals, which has as a result their physical development in the normal parameters, but also the creation of the necessary conditions for an active and healthy life.

Keywords: motor potential, young age, study.

Introduction

The awareness of the young generation on the benefits of working out through physical education as well as leisure activities, performance sports, etc., should be one of the main goals of the modern society in which we live, where the need for exercising it is generally passed as a secondary priority. The smoothly development of the younger generation, the maintenance of an adequate health status, the harmonious development of personality, the development of general motor skills, etc., are some of the main objectives of physical and sports education. Increasing the biological potential of someone in accordance with the changing social requirements is also one of the main factors that have as a goal the maintenance of healthy young people as well as the reduction of state expenditures in the health system by improving the population's health indicators.

It is well known that workotut, which is implicit in physical education, has multiple benefits for those who practice it: it improves physical and mental well-being, maintains optimal weight for the person who has an active sporting life, develops motor skills, improves motor skills and skills improves the self-confidence of the practitioner, favors social integration, improves sleep quality, reduces stress and depression, improves focus and attention etc.

The late adolescence (18-21 years) is characterized by Dumulescu D., Matei C (2017, p. 19) as: physical maturity; ending reproductive development; youngsters are usually developed at maximum potential; young people continue to gain in height, muscle mass, and weight.

Physical and sports education, as well as sport in general, should be seen as an organized lifestyle, and their continuity is the key to a healthy life, which besides the fun part of these phenomena have a multitude of advantages that I have previously presented , plus value by giving it the fact that it is practiced in a social group.

Materials and methods

This study aims to highlight the importance of physical education at the age of the young adult or late teenager and was conducted over a university year on a sample of 50 students. Two tests were conducted, one at the beginning of the academic year and the other at the end of the academic year. The main methods used in this study are: the bibliographic study method, the measurement and recording method, the experimental method, the statistical-mathematical method and the graphic method.

In this study, strength resistance of upper limb muscles (flotation), abdominal muscular strength (from fixed scale hanging, extended leg lift), strength of back muscles (trunk extension of the ventral-30 "), the force in the lower limb muscularity (squatting, vertical jump, and long jump), but also the speed running (50m start-up running).

Results

The tests that led to the determination of motor development in students and their evolution over a university year are presented below in graphical form as well as in data tables.

Table 1. *Calculated statistic indicators*

	50 m Sprint		Long jump from standing position		Push-ups	
	Initial	Final	Initial	Final	Initial	Final
Average	7,38	7,18	203,50	215,50	23,10	27,05
Minimum	6,7	6,6	175	195	4	7
Maximum	8,7	8,4	235	245	49	52
Range	2,4	2,2	60	50	43	42
Median	7,25	7	200	210,00	20,5	25,00
Lawer quartile	6,9	6,8	193,75	205,00	11,5	17,75
Upper quartile	7,9	7,6	215	222,5	33	36,25
Standard deviation	0,70	0,59	15,31	14,86	12,51	11,90
Coefficient of variability	9,43	8,22	7,52	6,90	54,16	43,98

Table 2. *Calculated statistic indicators*

	Lifting the legs extended from hanging position		The extension of the torso lying ventral		Vertical jump from standing position	
	Initial	Final	Initial	Final	Initial	Final
Average	5,13	7,63	17,50	20,13	23,88	29,00
Minimum	1	4	13	15	19	22
Maximum	9	13	22	25	31	36
Range	8	9	9	10	12	14
Median	5	7	17	19,5	23,5	28,5
Lawer quartile	3,5	5,75	13,75	17,75	21,25	26,75
Upper quartile	7,25	9,25	22	23,25	26,25	31,5
Standard deviation	2,80	2,92	4,17	3,56	4,09	4,34
Coefficient of variability	54,63	38,36	23,86	17,71	17,11	14,97

Knowing that the development of motor skills is based on three elements: the volume, the intensity and the complexity of the effort, it can be said that they are an acquired and perfectionable feature. Based on these assertions, I wanted to show the level of development of driving skills in the young adult age and their evolution during a university year.
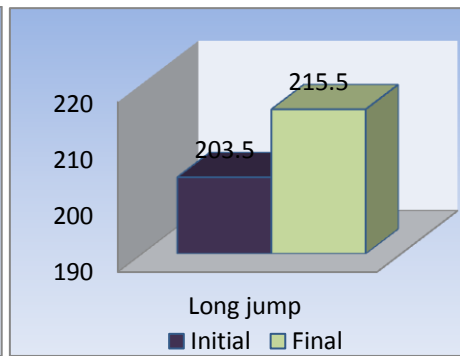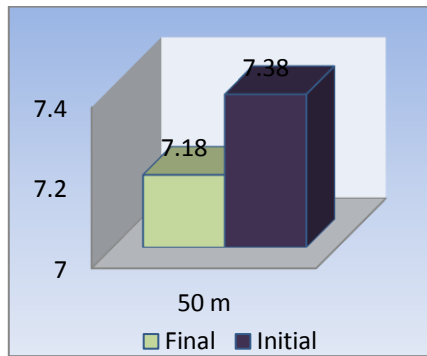
Figure 1.Average values of 50 m sprint   Figure 2. Average values of long jump from standing position
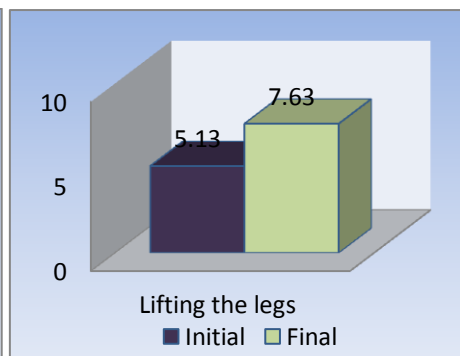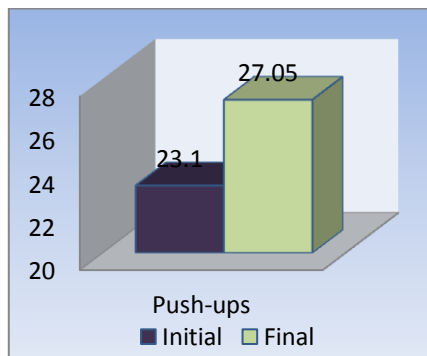

Figure 3. Average values of push-ups   Figure 4. Average values of lifting the legs extended
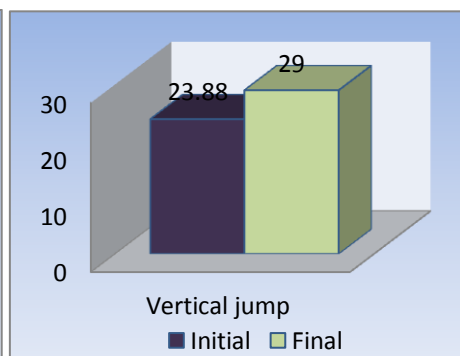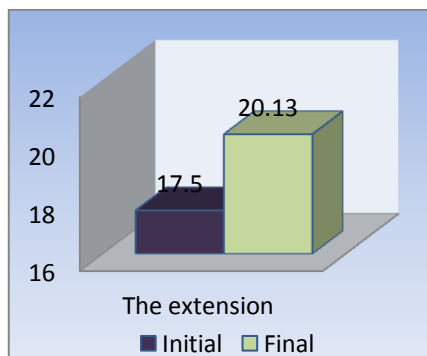from hanging position

Figure 5. Average values of the extension of   Figure 6. Average values of vertical jump
the torso lying ventral

Discussions

The statistical indicators underlying this study were: arithmetic mean, median, upper limit, lower limit, quartile, amplitude, standard deviation and coefficient of variability. Based on these we were able to observe the following:

Testing the velocity of the displacement achieved by 50m start-up running speed is expressed by the following values: the arithmetic mean of the initial test was 7.38 seconds, where it was observed that the minimum value was 6.7 seconds compared to the the maximum is 8.7 seconds. In the same context, the values have a low degree of scattering, the homogeneity of the group being high. For final testing, the average value is 7.18 seconds,

with a minimum value of 6.6 seconds and a maximum of 8.4 seconds. As with the initial testing, the final testing shows that the data is grouped around the mean and the group's homogeneity is high. The difference between the two final and initial averages is 0.20 sec.

The force of the lower limb muscular velocity expressed by the length jump is characterized by an initial arithmetic mean of 203,50 cm with a minimum of 175 cm,and a maximum of 235 cm. A feature of this initial test is the high degree of scattering of data around the average but with a large group homogeneity. The final force test in the lower limb muscularity is represented by an average of 215,50 cm, with a minimum of 195 cm and a maximum of 245 cm. Data spreading and group

homogeneity keep the initial test trend. The difference between the two tests is 12 cm.

Testing of the strength of upper limb muscles (float) is characterized by an average initial value of 23.10 flotations, where the minimum value is 4 flotations compared to the maximum one which is 49 repetitions. Also, the values obtained are characterized by high data sprawl and a very low group homogeneity. The final evaluation is noted by an average of 27.05 flotations, with the minimum and maximum values being respectively of 7 or 52 repetitions, the level of data spreading being similar to the initial testing. The difference between the two final and initial environments is 3.95 repetitions.

The abdominal muscular strength resistance expressed by lifting the extended legs from the hung on the fixed scale is characterized by an initial average of 5.13 repetitions, the minimum being of a repeat and the maximum of 9 repetitions. It also finds that values are grouped around the average, but group homogeneity is poor. For final testing, the arithmetic mean has the value of 7.63 iterations, the minimum being 4 repetitions and the maximum being 13 reps. In final testing, the standard deviation and the coefficient of variability show, as in the initial one, a very weak collective homogeneity and a distribution of the results around the average. The evolution of the two tests was 2.5 replicates.

Regarding the strength of the back muscles' strength tested by ventral trunk extension, the obtained data show that the arithmetic mean of the initial test is 17.5 repetitions compared to the final one, which is 20.13 repeats. For tests, the minimum values were 13 repetitions in the original and 15 repetitions for the final, and the maximum was 22 repetitions in the initial test and 25 repetitions in the final one. Studying the values obtained by the standard deviation and the coefficient of variability we can say that in the initial testing the homogeneity is weak, observing a distribution of the results around the average obtained. Instead, in final testing the valuesalso have a small scatter of data and the group's homogeneity is average. The progress between the two tests was of 2.63 reps.

In the case of testing the force in the lower limb muscles velocity (jump, vertical jump), an average value of 23.88 cm is observed at theinitial test, the minimum being 19 cm and the maximum of 31 cm. The final test is defined by an average of 29 cm, in this case the minimum value being 22 cm and the maximum of 36 cm. Both after the initial and the final testing we can see that the homogeneity is average and the distribution of the results is normal. The difference between the two final and initial environments is 5.12 cm.

Conclusions

Although in modern society the role of physical education is no longer perceived in its true value, we can say that this is the first type of education that has an influence on the individual's organism, being an indispensable component of general education, the formative character of physical education and sports given that it accomplishes the preparation of the subjects for life.

Increasing the number of physical education hours in all educational cycles can only have advantages for children and young people, which is not only the motor or intellectual aspect, it is also known to have an influence on the health of the individual, thequenching of the body, physicaleducationconsolidatingand improving motor skills and abilities, developing motor skills, forming and developing hygienic-sanitary skills, affective capacities (perseverance, will, feelings, reactions, inclinations) etc.

At the same time, physical education favors the social integration of individuals, which in turn has a connection with moral education, by developing moral traits and feelings such as courage, honesty, self-mastery, etc. The biological potential of the younger generation can be improved by the methods and means specific to physical education, which are adapted by the didactic framework to the possibilities, needs, gender, level of training and individual peculiarities of the individuals.

From the data we can conclude that the motric potential of the young generation is likely to be improved by means of physical education adapted to the peculiarities of individuals, the real knowledge of this potential being the basis for starting out in specific training.

The development of the motoric potential is also related to the strengthening of the health of individuals, which has as a result their physical development in the normal parameters, but also the creation of the necessary conditions for an active and healthy life.

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