

teams ranked 13 to 24 whose efficiency is on average 10% lower than the first 12 ranked (minimum-6.92%, maximum-12.42%).

### Conclusions

Peter Kovacs (EHF lecturer, coach at club and national teams with international results) considers that there is a certain lack of consistency in the game and from game to game, which makes between the top 10 ranked teams there are no significant differences, and errors can be decisive in the term of efficiency and occupied place in the final ranking.

In the final ranking of the competition in the first 12 teams were 11 from Europe and 1 from America, and among the last 12 have 2 from Europe, 4 from Asia, 3 from Africa and 3 from America.

The European women's handball supremacy is given so by the number of teams participating, but also by occupied places in the final ranking.

One of the concerns of participating teams was increased throws efficiency manifested by a trend towards to the top positions (Tables 1, 2).

In all analyzed parameters there is a downward curve given by their ranking.

In terms of efficiency indicators that are observed in the first part of the ranking teams they perform consistently, but teams ranked in last positions barely manage to perform in one or two of them.

The data obtained can be used as benchmarks of efficiency because they are actual, but should be a study of a longer period of time for the analysis performed to have a high degree of veridicity and data to be used as benchmarks for the following competitions.

### References

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## RESEARCH CONCERNING ON THE DETERMINATION OF THE FITNESS LEVEL OF THE STUDENTS

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**Abstract:** Fitness or physical form is a set of motrical activities systematically conducted for the harmonious development of the body using different gymnastic exercises and apparatus; in the sphere of fitness include other activities outdoors (swimming, cycling, running, skiing) which also have an functional effect mainly and can be correlated with other factors (water, air, sun) and hygiene (sauna, massage, diet and lifestyle). The research hypothesis was that curricular and extra-curricular activities of students performing physical activities influence the physical condition of the subjects. The study involved 36

students from the study program Physical Education and Sport (1st year) of the Faculty of Physical Education and Sport, Stefan cel Mare University of Suceava. It should be noted that their academic activities included 8 hours of practical activities per week, and some of the participants are practicing various sports at performance level, which means between 6 and 10 additional hours of training weekly. In context of these results should be performed an weekly physical activity program, which includes exercise sessions to maintain explosive strength and anaerobic physical fitness of the subjects, and exercises to help develop muscular strength and aerobic physical fitness

**Keywords:** fitness, students, research

### **Introduction**

A complete and complex fitness definition associating it with the physical form considers that as motric activity systematically conducted for the harmonious development of the body using different gymnastic exercises and apparatus; in the sphere of fitness include other outdoors activities (swimming, cycling, running, skiing) which also have an functional effect mainly and can be correlated with other natural factors (water, air, sun) and hygienics (sauna, massage, diet and lifestyle) (Enciclopedia educației fizice și sportului din România, volumul IV, 2002, p. 172).

This is achieved by practicing physical exercise is considered as a skill or ability to perform physical activity (Deuster, AP, 1997, p. 1).

The college students are largely considered a healthy population, but more than 30% are overweight or obese. The college is a period in which they often have poor diets and are physically inactive by using a lot of time on social media. Current recommendations for college student physical activity include 75 minutes per week of vigorous intensity aerobic activity. Findings suggest that internet activities may be associated with decreased vigorous physical activity (Moreno et al., 2013, 1:4).

Recent advances in digital technology have transformed the mobile telephone into a multi-function device. The cell phones are ever-present and their most common uses are calling, texting, updating social networking sites and browsing the internet (4-7 hours daily, 5-7 calls daily, 150-300 texting messages daily). The negative association between cell phone use and fitness (cardiorespiratory fitness) is an indicator of an individual's risk for a number of health concerns (Lepp et al., 2013, 10:79).

### **Material method**

The research hypothesis was that curricular and extra-curricular activities of students performing physical activities influence the physical condition of the subjects.

The study involved 36 students from the study program Physical Education and Sport (1st year) of the Faculty of Physical Education and Sport, Stefan cel Mare University of Suceava.

It should be noted that their academic activities included 8 hours of practical activities per week, and some of the participants are practicing various sports at performance level, which means between 6 and 10 additional hours of training weekly.

Control tests were applied: trunk lifting, push-ups, the Ruffier test, the Step test Harvard.

The research was conducted during March-June 2015.

### **Results and discussions**

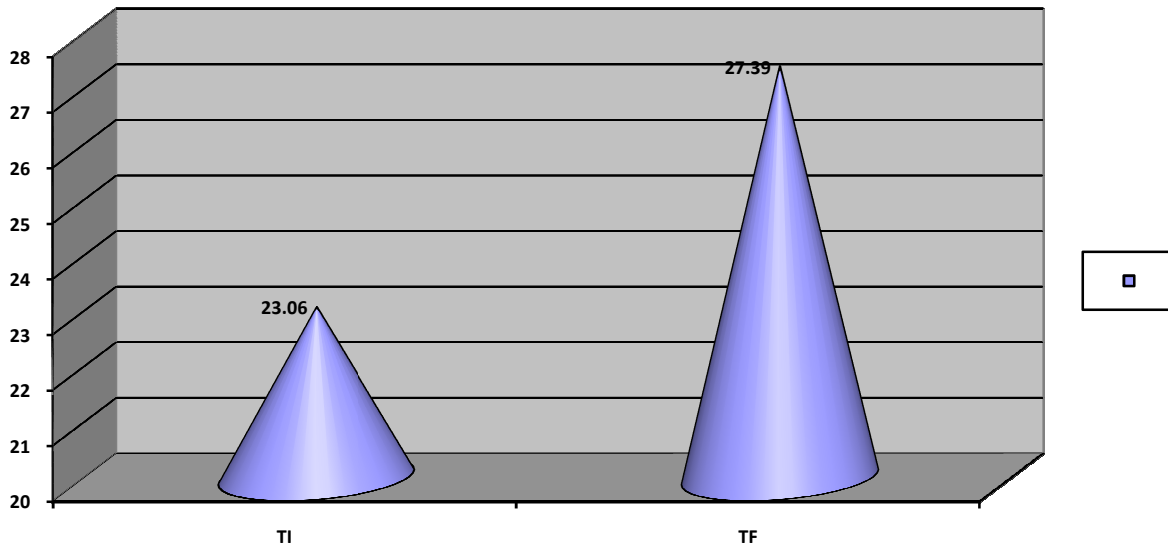
After applying the the tests, the data was centralized and was performed mathematical statistics by calculating the following parameters: arithmetic mean, maximum, minimum, standard deviation, coefficient of variation for both initial and final testings (Table no. 1).

<b>The statistical parameters / Tests</b>	<b>Trunk lifting (no. rep.)</b>		<b>Push-ups (no. rep.)</b>		<b>Ruffier test (points)</b>		<b>Step test Harvard (points)</b>	
	<b>IT</b>	<b>FT</b>	<b>IT</b>	<b>FT</b>	<b>IT</b>	<b>FT</b>	<b>IT</b>	<b>FT</b>
<b>X</b>	23,06	27,39	25,08	26,03	15,32	13,35	70,98	72,34
<b>Max</b>	15	16	1	5	5,2	4,4	51,22	51,95
<b>Min</b>	34	36	60	49	26,8	25,6	134,68	125,39
<b>S</b>	4,62	5,58	14,62	13,84	4,08	5,14	17,52	14,53
<b>CV</b>	20,05	20,36	58,28	53,18	26,63	38,49	24,69	20,08

**Table no. 1 Test results**

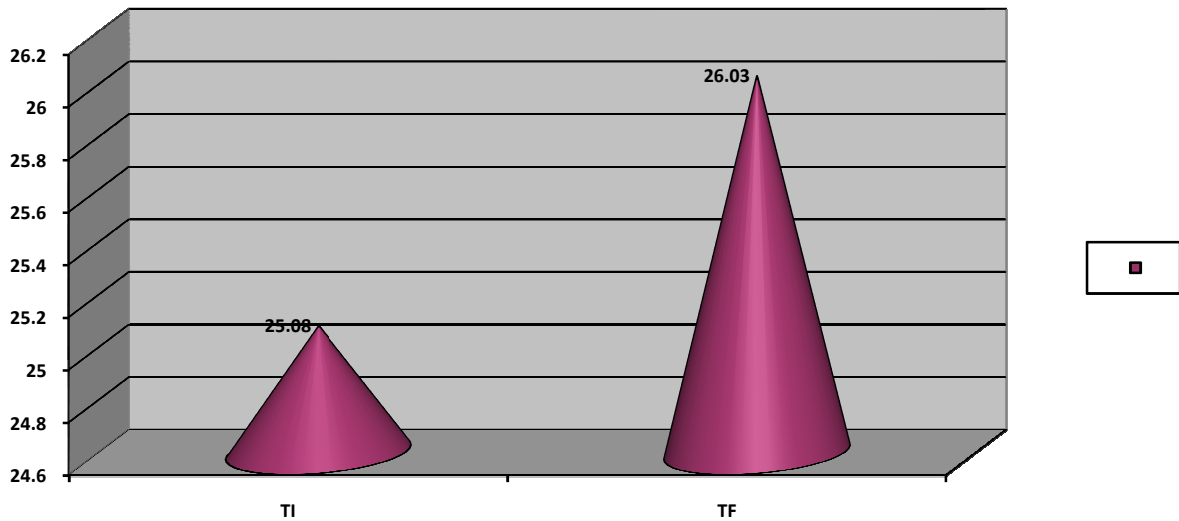
For trunk lifting the individual values were in the range of 15-34 repetitions, the arithmetic mean being 23.06 repetitions at initial testing and values between 16 and 36 repetitions and an average of 27.39

repetitions at the final testing. Progress was 4.33 repetitions and coefficient of variation values indicate the average homogeneity group (initial testing – 20.05% final testing – 20.36%) (table no. 1, figure no. 1).



**Figure no. 1 - The results for trunk lifting**

At the push-ups was progress of 0.95 repetitions (initial testing – 25.08 repetitions, final testing – 26.03 repetitions). The wide spread of the individual results (1-60 repetitions; 5-49 repetitions) made the values of the coefficient of the variability to be the highest and small group homogeneity (58.28%, 53.18%) (table no. 1, figure no. 2).



**Figure no. 2 - The results for push-ups**

For Ruffier test the individual values were in the range of 5.2-26.8 points, the arithmetic mean being 15.32 points at initial testing and values between 4.4 and 25.6 points and an average of 13.35 points at the final testing. Progress was 1.97 points and the coefficient of variation values indicate small homogeneity group (initial testing – 26.63% final testing – 38.49%) (table no. 1, figure no. 3).