THE RELATIONSHIP BETWEEN EXERCICES AND SELF-ESTEEM

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ABSTRACT. Background. A growing number of studies show the effects of exercise and self-esteem, which prompted us to study changes related to self-esteem, as a result of sports and weight loss. Objectives. This paper aims to highlight the relationship between exercise and self-esteem. The basic issue is the definition and description of these two concepts, analyzing the relationship between them. Methods. In designing this study we used the study of the bibliographical material (documentation), the observation method (measuring weight), the test method (test Rosenberg - 1965), graphics and the statistical method (data processing). Measurements and Rosenberg test were applied to two samples (control and experiment) of 30 students; we have registered the initial results and after six months, during which the sample experiment was performed exercise in the form of aerobic gymnastics, regularly and organized. The results obtained were processed using SPSS and implemented in graphics. Results. By practicing regular physical exercise we reach energy consumption, which leads to lower fat and thus the weight loss and increased self-esteem. The analysis of the results confirms the interdependence of exercise and self-esteem. Conclusions. Exercise has a positive effect on self-esteem. As an individual, if you lose weight you look better - physically, you feel better - emotionally, you reach to fit better in social terms, resulting in a change in self-image, it increases more and more.

Keywords: exercise, self-esteem.

Rezumat. *Relația dintre exercițiile fizice și stima de sine.* *Premize.* Un număr tot mai mare de studii arată efectele exercițiilor fizice asupra stimei de sine, ceea ce ne-a determinat să studiem modificările apărute la nivelul stimei de sine ca urmare a practicării exercițiilor fizice și a scăderii în greutate. *Obiective.* Lucrarea de față are ca obiectiv evidențierea relației dintre exercițiile fizice și

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stima de sine. S-a plecat de la definirea şi descrierea acestora analizând relaţia între cele două noţiuni. *Metode.* În conceperea acestei lucrări s-a folosit studiul materialelor bibliografice (documentarea), metoda observaţiei (măsurarea greutăţii), metoda testelor (testul Rosenberg – 1965), reprezentarea grafică, metoda statistică (prelucrarea datelor obţinute). Măsurătorile şi testul Rosenberg s-au aplicat pe două eşantioane (de control, de experiment) a câte 30 de studente şi s-au înregistrat rezultatele iniţial şi după şase luni timp în care cu eşantionul de experiment s-a practicat exerciţiile fizice sub forma gimnasticii aerobice în mod regulat şi organizat. Rezultatele obţinute au fost prelucrate cu ajutorul aplicaţiilor SPSS şi transpuse în grafice. *Rezultate.* Prin practicarea exerciţiilor fizice în mod regulat se ajunge la consum de energie, ceea ce duce la diminuarea grăsimilor şi implicit la scăderea în greutate şi creşterea stimei de sine. Analiza rezultatelor confirmă interdependenţa dintre exerciţiile fizice şi stima de sine. *Concluzii.* Exerciţiile fizice au un efect pozitiv asupra stimei de sine. Ca individ dacă ai pierdut din greutate arăţi mai bine din punct de vedere fizic, te simţi mai bine din punct de vedere emoţional, reuşeşti să te integrezi mai bine din punct de vedere social, rezultând o modificare a imaginii de sine, deci stima de sine creşte.

Cuvinte cheie: exerciţiul fizic, stimă de sine.

Introduction

Since we wanted to start from:
a)   Physical educations' benefits on the body;
b)   factors that cause obesity;
c)   the contribution of exercise to improve self-esteem;
we consider it is necessary to define and develop these concepts.

Exercise "is the action involving mainly the body, handled systematically and consciously, in order to improve the physical and motor ability of the people". (Şiclovan, I., 1979)

The general benefit of the exercise is to improve the overall health and the ability to do certain activities for a period of time. Exercise has the following effects:

1. Health - Improving the physical quality of life
- To feel good
2. Mental health and wellbeing:
- Increases intellectual capacity
- Increase stress control
- Eliminate depression

- Helps you sleep better and reduce anxiety
- Increase confidence and self-esteem
- Preventing and combating headaches
- To stop smoking

3. Functional capabilities:
- Increases energy levels
- Improves muscle strength and endurance
- Improves bone density and prevent osteoporosis
- Increases flexibility
- Creates protection from stress
- Improves body posture

4. Weight control:
- Maintenance and reducing weight
- Increase metabolism and burn calories
- Decreases obesity

5. Cardio – vascular health:
- The heart becomes stronger and it decreases the pulse
- Reduce the risk of heart disease
- Decreased pulse pressure
- Reduces the risk of cardiac injury

6. Disease prevention:
- Immune system becomes stronger
- Increase blood sugar control
- Increase good cholesterol and lowers bad cholesterol
- Reduces the risk of developing various diseases such as colon cancer, type II diabetes and lung disease

7. Aging and longevity:
- Helps you easily and slowly grow old
- To have a long active period
- Keep your independent life style
- Reduce the risk of fracture and osteoporosis.

Effects of aerobic gymnastics:

- ➢ vital capacity increases;
- ➢ improves pulmonary elasticity;
- ➢ toning the respiratory muscles;
- ➢ balances blood pressure;
- ➢ improves blood circulation;
- ➢ strengthens bones;
- ➢ tones muscular system;

- ➢ balances glucose metabolism;
- ➢ increases immunity;
- ➢ systematic and rhythmic blood oxygenation.

Besides the fact that obesity is a major health problem, it is also an aesthetic problem. Obesity is caused by a number of factors such as family disorganized lifestyle, excessive food intake, unhealthy diet rich in fats and carbohydrates, irregular mealtimes, sedentary lifestyle, "pecking" continuously between meals and the most important factor being physical inactivity.

Self-esteem: Rosenberg (in 1979) defines self-esteem as a complex cognitive and affective synthesis.

He believes that self-esteem dictates attitudes, more or less right, of the individual towards himself. Self-esteem is how we evaluate ourselves in relation to others and their own expectations and awareness of the value and it is directly proportional to our past, present and future.

According to F. Sordes - Ader, G. Leveque, N. Oubrayrie and C. Safont Mottay (1998) global self-esteem has the following dimensions: emotional self (self-control level) social self (sense of social recognition), self employment (job performance) physical self (including body image, perception of own body, the opinions of the others on your own appearance and physical fitness) anticipatory self (attitude towards what it awaits for one in the future).

Referring to the physical self, which includes body image, we can highlight the role of exercise in improving this image in terms of body shape and weight. As the appearance is nicer the body image is better and it increases the self esteem. A high self esteem gives greater confidence, ones values, as an individual, are higher, you accept risks more easily, you emphasize your own skills.

Generally, obese persons will have a low self esteem. They will tend to feel uncomfortable with their body, perceiving their body size as a personal failure, to avoid risks, to feel shame and anxiety. These dissatisfactions affect lifestyle and are directly proportional to physical and mental health.

Objectives

The research aims at:

- Highlighting the relationship between exercise and self-esteem;
- Development of programs of aerobics body styling (sculpture);
- Measurements and data recording;
- Applying Rosenberg test;

Assumptions

We suppose that exercise programs, such as body styling, and aerobic exercises affect the self-esteem.

Research subjects

The research was done on two samples of 30 students (control group and experimental group) at North University of Baia Mare, students aged between 19 and 21 years. The control group was measured and recorded initially and after six months for body weight and than it was applied the Rosenberg test, also initially and after six months.

In the experimental group we had initially measured and recorded weight and Rosenberg test. During six months we had a daily exercise program, three times weekly, 50-minute of body styling and aerobic programs aiming at weight reduction and increasing self-esteem. Finally we measured and recorded again weight, and self-esteem scale was applied.

Results

The results obtained from measuring the subjects included in the experiment were analyzed in terms of the following parameters: arithmetic mean, standard deviation, median, minimum and maximum values. These parameters were included in the charts presented in this paper, charts showing differences arising between the progress of experimental group's components and the control group's progress.

The values obtained after the statistical analysis performed, based on the results recorded in the measurement of body mass (weight) and Rosenberg test are summarized in Tables 1 and 2.

Table no. 1.

Weight values

Parameters	Control group		The experimental group	
	initial weight	final weight	initial weight	final weight
Arith. mean	68.73	68.6	71.3	67.15
Min.	51	51	55	51.5
Max.	88	87	113	105
Median	65.75	65.75	68	64
Std.deviation	9.66	9.81	15.37	14.57

Table no. 2.

Values of self-esteem

Parameters	Control group		The experimental group	
	Initial self esteem	Final self esteem	Initial self esteem	Final self esteem
arith. mean	27	26.83	24.9	31.76
Min.	18	18	16	24
Max.	35	35	31	39
Median	27	27	25	32
std.deviation	4.28	4.35	3.82	3.53
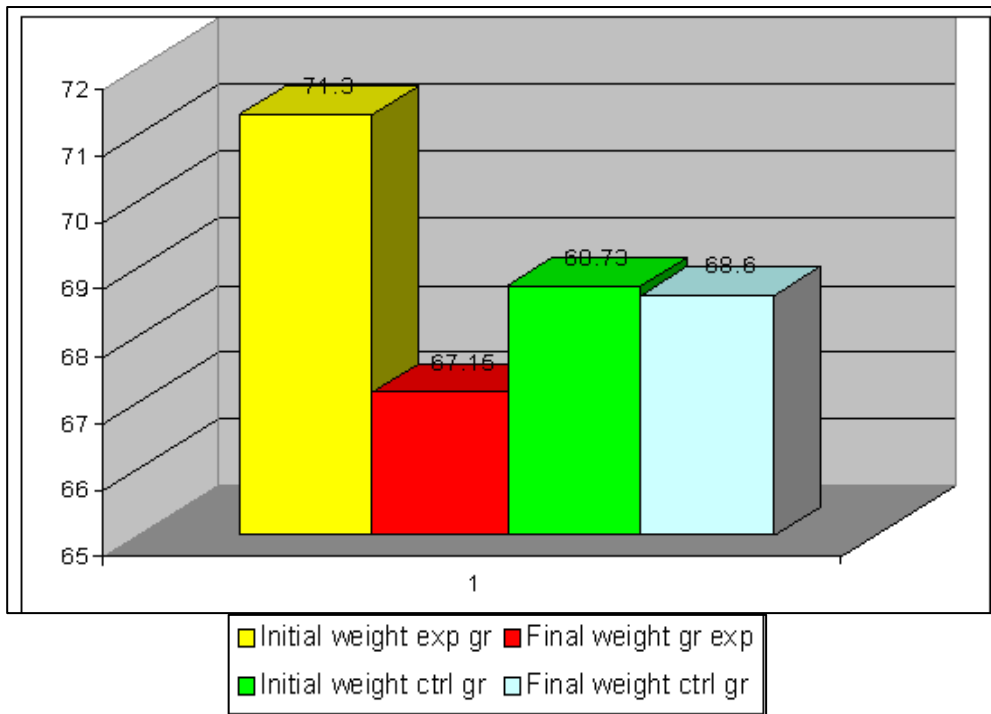
Chart No. 1. Weight's arithmetic mean values
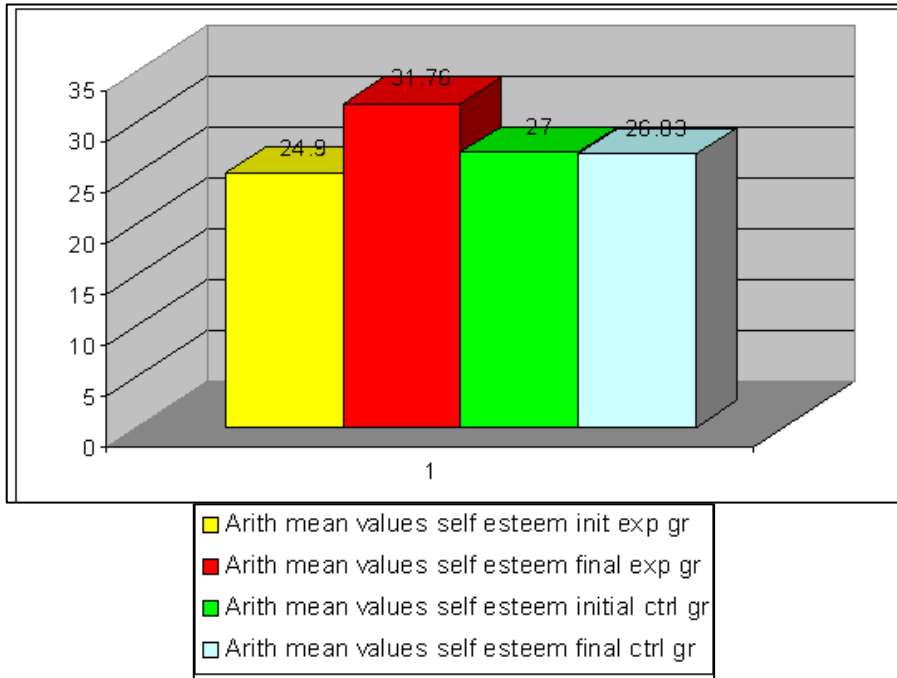
Chart No. 2. Self-esteem's arithmetic mean values
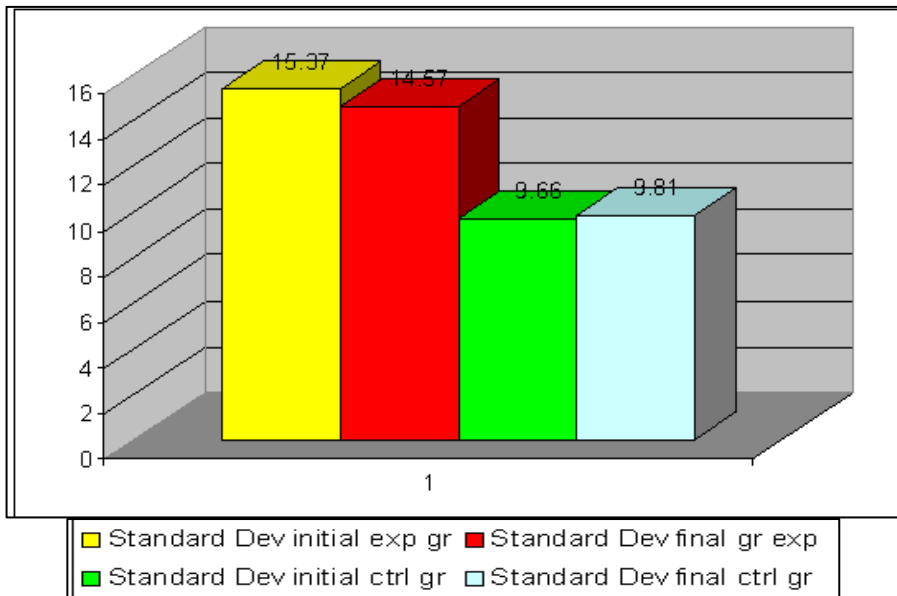
Chart No. 3. Weight's standard deviation values
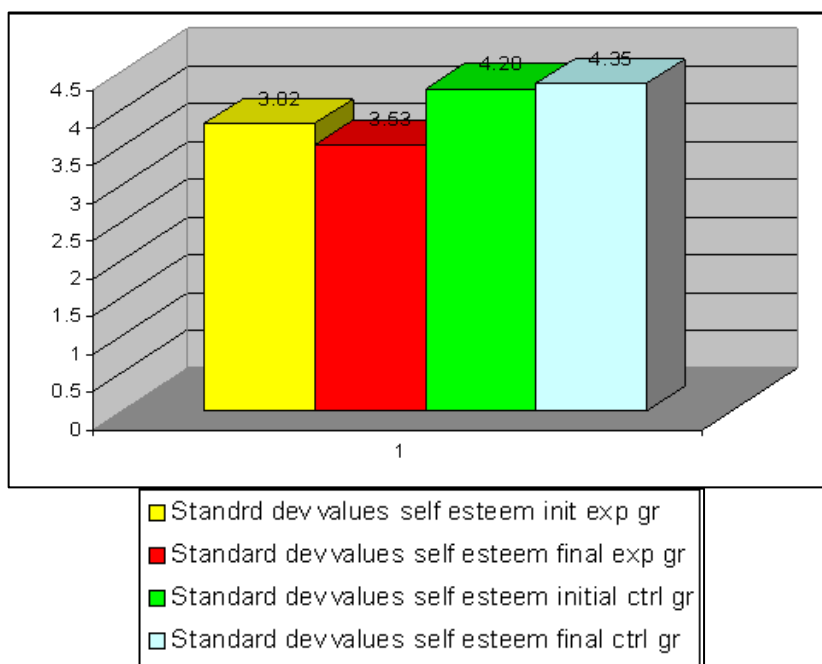
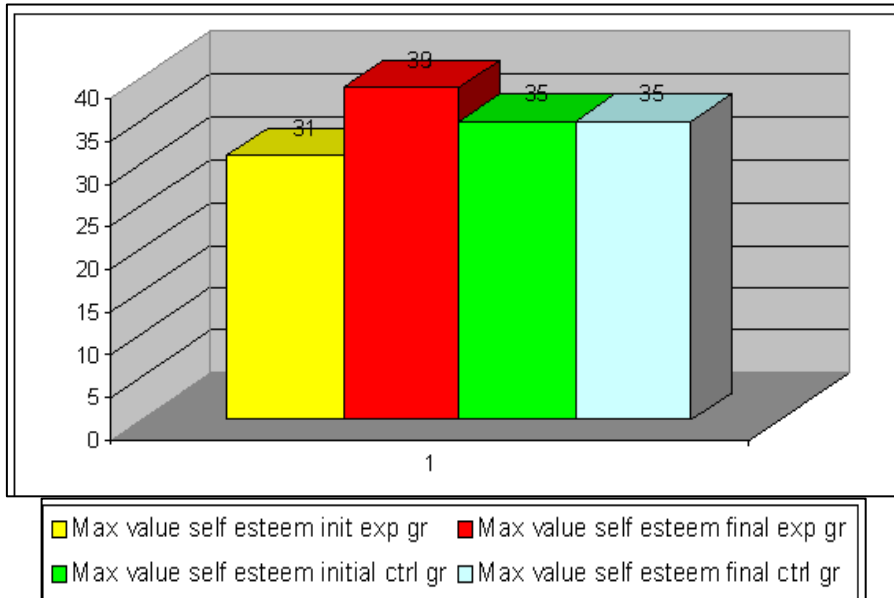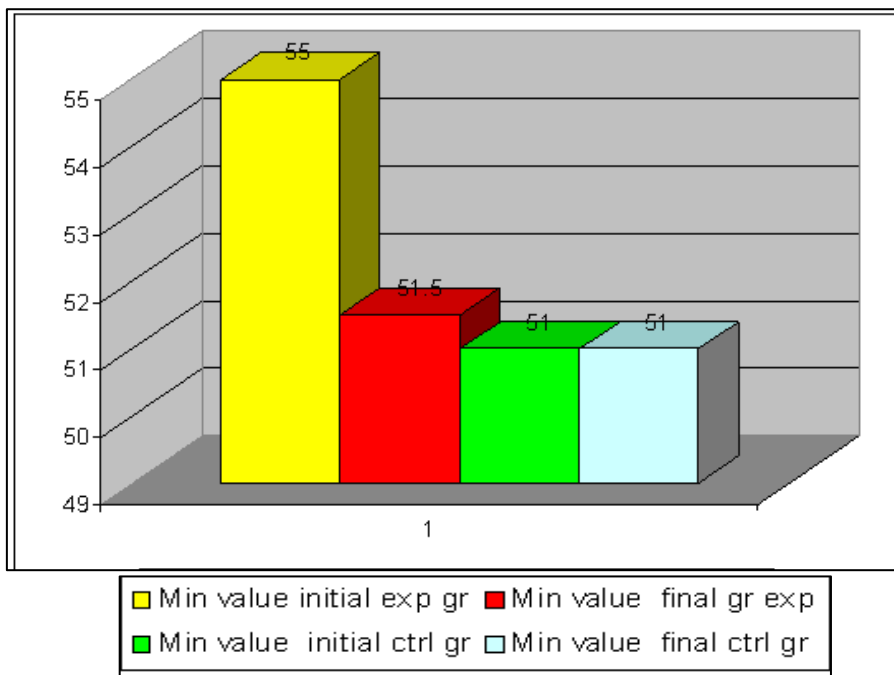**Chart No. 4. Self-esteem's standard deviation values**
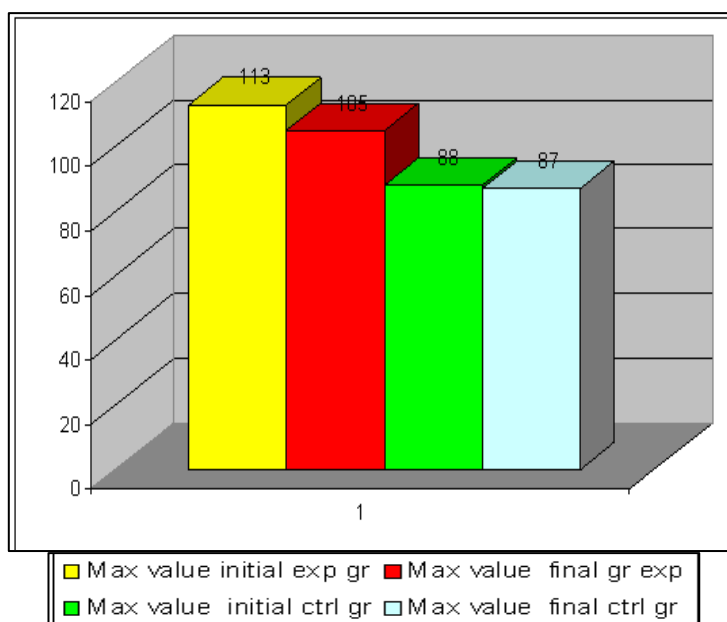
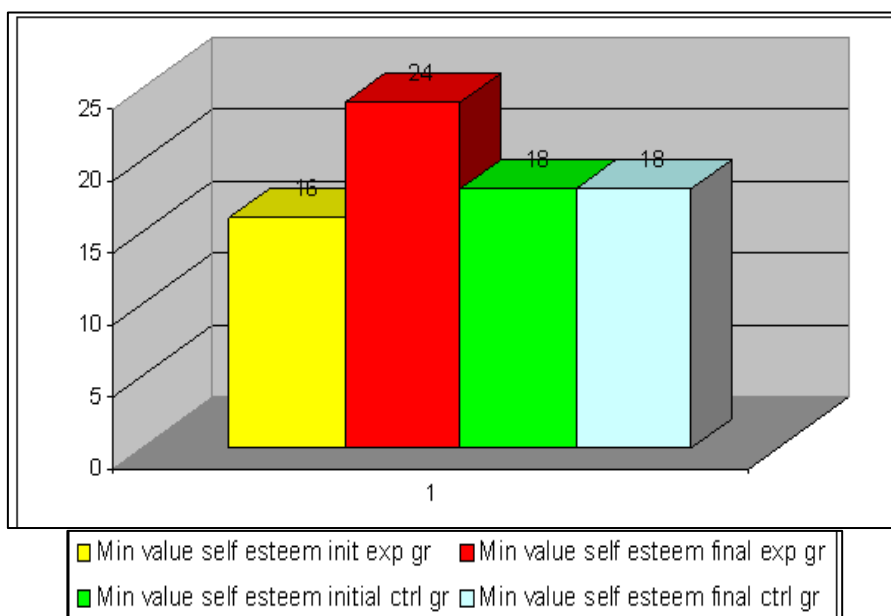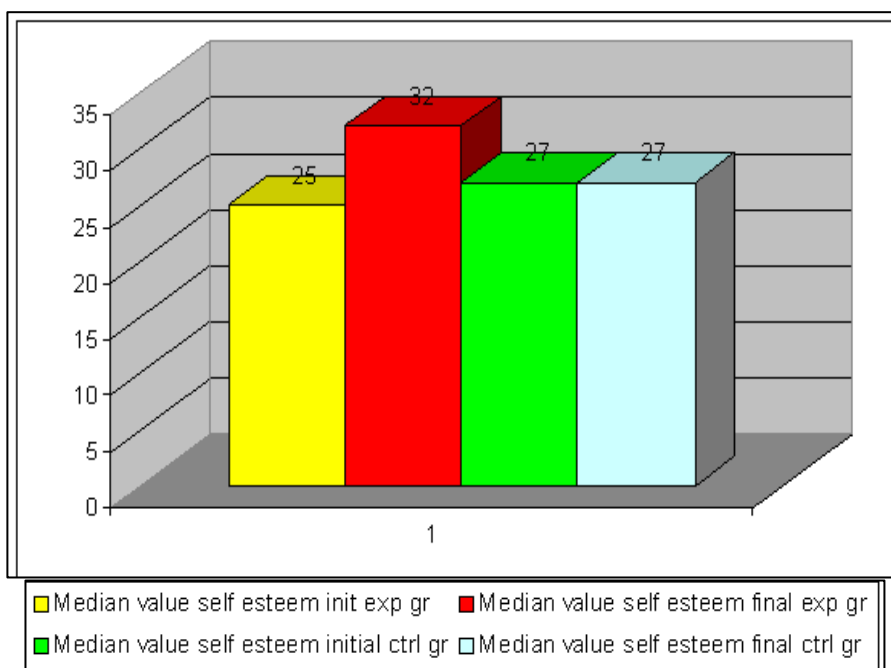**Chart No. 5. Weight's maximum values**

Chart No. 6. Self-esteem's maximum values

Chart No. 7. Weight's minimum values

Chart No. 8. Self-esteem's minimum values

Chart No. 9. Self-esteem's median

Discussions

Table no. 1 and chart no.1 presents weight's arithmetic mean. In the experimental group it decreased from 71.3 to 67.15, or 4 kg, while for the control group the decrease is insignificant, 130 grams.

Table no. 2 and chart no. 2 presents the self-esteem's arithmetic mean. In the experimental group it increased from 24.9 to 31.76, meaning 6.86 points, while for the control group, the self-esteem decreases from 27 to 26.83, i.e. -0.17 points.

Table no. 1 and chart no. 3 shows the evolution of weight's standard deviation. In the experimental group it decreased from 15.37 to 14.57, i.e. 0.80 kg, from which we deduce an increase in homogeneity of the experimental group during the period under review, compared to the control group where the standard deviation increases from 9.66 to 9.81 (0.15 points), which means that group homogeneity decreases from initial testing to final testing.

Table 2 and chart no. 4 shows the evolution of self-esteem's standard deviation. In the experimental group it decreased from 3.82 to 3.53, i.e. by 0.29 points, from which we deduce the experimental group's homogeneity increased in the analyzed period, comparing with control group's standard deviation, that increases from 4.28 to 4.35 (0.07 points) which means that group's homogeneity decreases from initial testing to final testing.

Statistically significant results for self-esteem

To see if there are significant differences between the studied groups, for the normal distribution data we used the t Test (Student). For the uneven distribution values, or ranks, we used the nonparametric test Mann-Whitney (U), for two unpaired samples, or the Wilcoxon test for two paired samples, values that can be found in Table No. 3

Table 3.

Values of statistical significance for self-esteem

Group	Statistical Significance (p)		
	Unpaired Samples		Paired Samples
	T_1	T_2	$(T_1 – T_2)$
I	I-II: 0,5981	I-II: < 0,0001	<0.001
II	-		< 0,0001

For the statistical analysis of self-esteem questionnaire scores, when comparing the two groups, there were no statistically significant differences observed between them, at the time T1 (p = 0.5981). Statistically significant strong differences were observed between the two groups at T2 time (p < 0.0001).
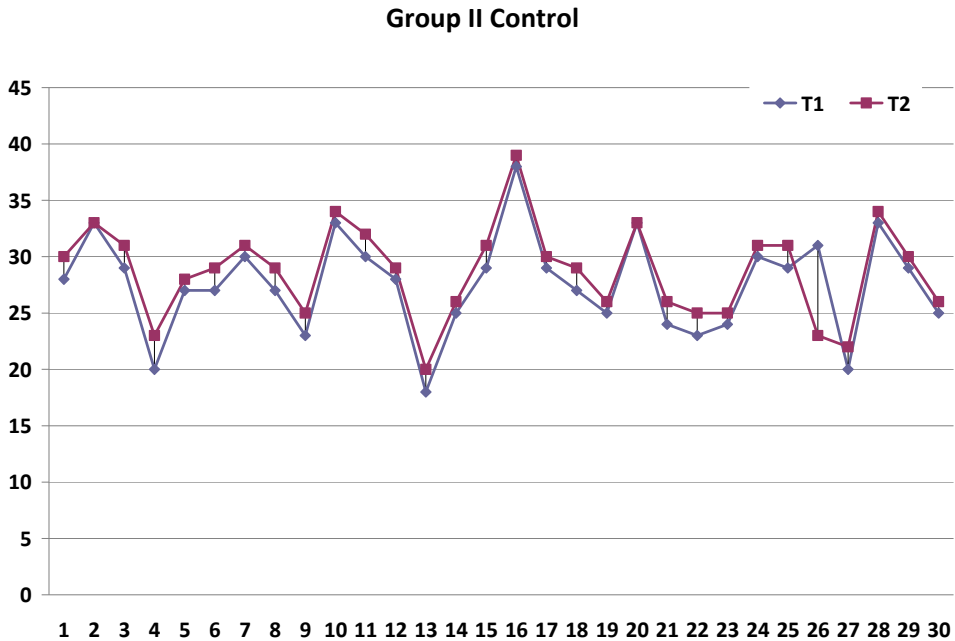
For the statistical analysis of the scores on the questionnaire applied to paired samples (times T1-T2), we observed highly statistically significant differences for the two groups (p <0.001).

In the statistical analysis applied to the questionnaire scores, at the unpaired samples, there were statistically significant differences observed between any of the groups, at the time T1 (p> 0.05). At the time T2 highly statistically significant differences were observed between the groups I-II p < 0.001).

The evolution of the results can be seen in graphs 10 and 11.
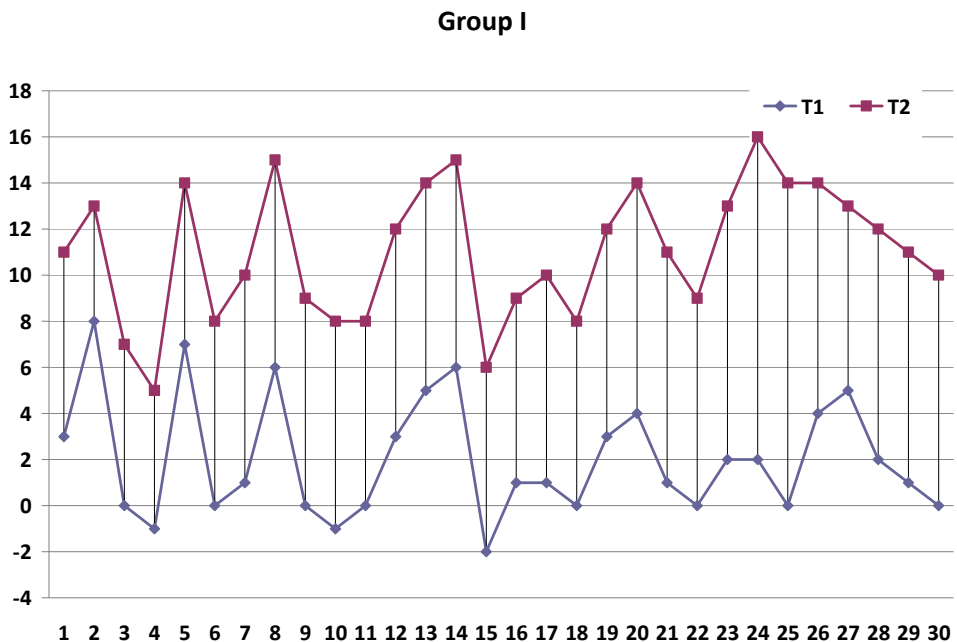
Group I

Graph 10. Individual variations of self-esteem questionnaire scores for the experimental group

Group II Control

**Graph 11. Individual variations of self-esteem questionnaire scores
for the control group**

Conclusions

After SPSS statistical analysis of the results obtained for the two groups (experimental and control) and their interpretation we arrived to the following conclusions:

- The experimental group made significant progress both in terms of weight and self-esteem parameters;
- Students who participated in aerobics classes lost weight, improving their body image and self-esteem;
- We can say that the body styling programs applied to the experiment group were effective, reaching the goal;
- There are visible positive effects obtained by the experimental group, confirming research's hypothesis that exercise affects obesity and self-esteem.

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