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Procedia - Social and Behavioral Sciences 46 (2012) 3738 – 3741

**Procedia**  
Social and Behavioral Sciences

WCES 2012

## The improvement of the adult's life quality by the body autoplasty effects of the physical exercises

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### Abstract

We have dealt with the research from the perspective of the definition given to health by W.H.O.: "health is that certain estate of wellness from physical, mental and social point of view and it doesn't represent the lack of illness or disability". The most important problem which sedentariness produce rises from that view according to which it doesn't represent only a momentary estate, it becomes a real lifestyle an extremely unhealthy way to live. Physical inactivity affects not only the individuals but also the whole social communities group, and the effects of sedentariness over the world's population mean and imply extremely high costs. The purpose of the paper is to promote the body autoplasty concept through physical exercise by stimulating the psychological resources of the self-consciousness and self image, by making each individual aware of the necessity of practicing physical exercises for body shape in order to improve the quality of his/ her life. The experiment proves that some independent variables of the quality of life are influenced by reaching body autoplasty through physical exercise when its use takes into account the appropriate didactical strategy which is focused on the operational objectives meant to improve the physical state and/or individual body shaping/re-shaping.

*Keywords:* motrical activity, body autoplasty, normal weight, nutrition.

### Background

In Romania, the adults between 20-64 years represent 51% of the population. The cortege of the diseases caused by overweight, at this age (obesity, cardiovascular diseases, diabetes, etc.) is the expression of a lifestyle characterized by the lack of exercise, low physical activity or physical inactivity and by the incorrect nutritional practice. [<http://www.gandul.info/societatea/4-5-million-romanian-obese-951537> accessed on January, 14, 2010; Fiedler P., 1996, p.10, Mihailescu L., Enache C., 2011]. The physical inactivity, the sedentary lifestyle, is a real danger for the modern individual's life [Dumitru Gh., 2006, Mihailescu L., Enache C., 2010,] and the World Health Organization (WHO) estimates that this is the main reason that the world is a record 1,9 million premature deaths and in Europe their number is about 600 000. [Martin, B., W., Khlmeier, S., Racioppi, F., 2006; [http://www.medicinasportiva.ro/sport/articles/Physical %20 activity % 20in %20 Europe %20 I .html](http://www.medicinasportiva.ro/sport/articles/Physical%20activity%20in%20Europe%20I.html) accessed on January, 14, 2010; [http://articles.famouswhy.ro/how\\_improves\\_physical\\_exercise\\_health\\_state/](http://articles.famouswhy.ro/how_improves_physical_exercise_health_state/), accessed on October, 8, 2010.]. An accomplished and published statistics by the Ministry of Health of Romania in 2007 highlights the fact that 8 million people are overweight and more than 4.5 of them are obese, which is alarming for the health of the population. [Dumitru Gh., 2006]. WHO considers that promotion of a healthy lifestyle that includes the physical activity, physical exercise and sports, the rational healthy nutrition, can resolve this social problem. Other studies and researches are emphasizing the various benefits the physical exercises practice [[http://www.sportscience.ro/html/magazines\\_2006\\_55-1.html](http://www.sportscience.ro/html/magazines_2006_55-1.html) accessed on December, 12, 2009].

## Purpose of Study

The purpose of the paper is to promote the body autoplasty concept through physical exercise by stimulating the psychological resources of the self-consciousness and self-image, by making each individual aware of the necessity of practicing physical exercises for body shape in order to improve the quality of his/ her life.

## Methods

The most important research methods of this research that were used in system were the direct observation, the case study and the longitudinal experiment. The instruments that were used to assess the effects of autoplasty were: Quetelet index (I.Q) and Erissman index (I.E), Ruffier index, VO<sub>2</sub> Max., quality of life index. The quality of life was assessed by "Quality of Life Questionnaire" (N.I.L.C.), "The self-image of themselves" and self-esteem "Rosenberg scale".

## Findings and Results

In order to verify the work hypothesis it has been achieved a longitudinal experiment, an action – research, conducted during one year where the subjects, adults aged between 20 – 56 years, practiced physical activities daily during 30 – 90 minutes, as: walk in force, running, aerobics, Pilates gymnastics, fitness, sportive dance, etc.

During the physical activities many information about the principles of a healthy nutrition, diet, energetic consumption, balance between consumption and effort, etc. were presented.

The evaluation of the different types of physical activities effects was made by using the observation, by determining the body harmony indexes (Q.I., E.I.), the effort indexes (I.R., VO<sub>2</sub> Max.), the life quality indexes (Q.I.), "the self image of themselves" and self-esteem "Rosenberg scale".

Table 1. The dynamic of the statistic indexes Q.I.

Quetelet Index Q.I.	T1	T2	T3
X	23,08	22,98	22,21
SD	±2,56	±2,48	±2,45
Cv	9,88%	10,3%	10,5%
t	1,86		
p	p > 0,05		

Table 2 The dynamic of the statistic indexes E.I.

N.P.	Erissman Index E.I.		
	T1	T2	T3
X	10,23	6,81	5,20
SD	±8,03	±7,49	±7,39
Cv	36%	24%	14%
t	2,34		
p	p < 0,05		

The average of the Quetelet index (Q.I.) recorded at initial testing (T1) showed a value of 23.08, the term test (T2) had a value of 22.98 and the final testing (T3) the value was optimized reaching 22.21. The coefficient of variability had a value of 9.88 at initial testing (T1), so we had a high degree of homogeneity, but in the last two tests (T2 and T3) value exceeded 10% so the degree of homogeneity of the group was medium for this index. The "Student" test value calculated between T1 and T3 is 1.86 therefore the differences between the two averages of the two tests are insignificant,  $p > 0.05$ .

The average of the Erissman index (E.I.) was 10.23 at T1 testing and even from the T2 testing we can see an optimization of the index, and for the T3 testing the recorded value was 5.20. The coefficient of variability had an upward trend, from the lack of homogeneity to good homogeneity for the final testing. The value of the "Student" test calculated between T1 and T2 is 2,34, therefore the differences between the averages of the two tests are significant  $p < 0,05$ .

Analyzing the Ruffier index (effort capacity) we discovered an average value with decreasing trend, of improvement, from 11.16 on initial testing (T1), to 8.63 and 7.03 at T2 and T3. The coefficient of variability records a value of 17.65% at initial testing (T1), a homogeneous group with average growth trend in T2 and T3, where its value is over 20%, indicating a lower degree of homogeneity of the group. The "t" test value is 5.03, which allows us to state that differences between the two test are significant,  $p > 0.01$ .

Table 3. The dynamic of the statistic indexes R.I.

Ruffier Index	T1	T2	T3
X	11,16	8,63	7,03
SD	±1,97	±1,98	±2,09
Cv	17,65%	22,94%	28,63%
t	5,03		
p	p < 0,01		

Table 4. The dynamic of the statistic indexes Max VO<sub>2</sub>

Max VO <sub>2</sub> ml/kg	T1	T2	T3
X	27,39	31,54	33,51
SD	±3,79	±2,93	±3,60
Cv	13,83%	9,28%	10,7%
t	4,08		
p	p < 0,01		

Analyzing the Max VO<sub>2</sub> we found an average of 23.39 for T1 test, 31.54 for intermediate test, a value of 33.51 for T3. The differences between the averages of the initial and final test are significant,  $p < 0.01$ , during the increasing of the variability coefficient of the group during the experiment.

Health state is the most important indicator of quality of life, and the first item of QI referred to the manner in which subjects have appreciated the health state at the end of action-research. Thus, 33.3% of respondents felt that their health is very good, 58.4% were considered that they acquired a good health and 8.3% felt that their health is rather good. At the next item, subjects rated their health compared to that when they entered the experiment. At this item 25% felt that they have a much better state of health, 50% good and 25% the same. So, compared to baseline, participants appreciate that their health has improved (75%), all subjects considering that one of the causes for this development of their health is the practice of physical exercise combined with healthy nutrition.

On the accumulation of knowledge about nutrition, subjects said that "there were many new things, gave me a new perspective", 33.3%, "I learned quite a few new things", 58.4%, 8.3 % considering that "most of things about the program on diet and nutrition I had known.". The answers of the subjects confirm that the subjects have acquired new knowledge about nutrition, and knowledge that have been applied "to some extent" by 83.3% and "great extent" of 16.7%. Is generally known that women are dealing with food for their families, they have also benefited from knowledge "to some extent" 91.7%, 3% stating that they applied knowledge in their family in "a great measure ". In this context, most of the subjects (58.4%) believe that this knowledge will be useful in the future "more" and "very much" (41.6%). These aspects indicate that the program has proven useful on the nutrition component, considering that the information is a new one.

The issue of self-image is a complex one; it is quite difficult to study due to personal implications. From our perspective, weight loss to near the ideal weight by reducing body fat in different anatomical parts correlates with a positive image for us, with a good ability to solve personal and professional problems. To analyze the action –research effects on self-image at the end of the intervention was applied "*The self image of itself*" psycho test. The analysis results found that 25% of subjects have had a *good* self-image at the end of the experiment, 75% have a *very good* self-image. This shows that subjects have a reasonable level of psychic comfort, which is a necessary support for accession to the ideal model of each one.

Self esteem is one of the fundamental dimensions of personality, a human need for fulfillment of self and consciousness of its own values. In order to assess the level of confidence in own forces we applied to the subjects the "Rosenberg – Scale self esteem" psycho test reaching out to the following results: 33.3% of the subjects have obtained a score of approximately 20-30 points, which means that they have a *medium* self esteem, 66.7% subjects with a score of approximately 30-40 points corresponding to an *increased* self esteem. We consider the results as joyful as having a high self esteem; the subjects are convinced of their own ability to adapt to the fundamental challenges of life.

Table 5. The results of „ Rosenberg Scale" application

Points	Appreciation on Rosenberg Scale	Percentage
10-20	lower self-esteem	0%
20-30	medium self-esteem	33,3%
30-40	increased self-esteem	66,7%

## Conclusions

The experiment proves that some independent variables of the quality of life are influenced by reaching body autoplasty through physical exercise when its use takes into account the appropriate didactical strategy which is focused on the operational objectives meant to improve the physical state and/or individual body shaping/re-shaping.

Taking into account the fact that the benefits of attending body autoplasty programmes are multiple in various plans (psychological, physical, social, economic, and financial), have been proved, we consider that these has an important role in creating the premises of having a healthy life style and an increased level of life.

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