

LONGEVITY IMPROVEMENT IN ELDERLY PEOPLE THROUGH GYMNIC ACTIVITIES

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Abstract: *Lifestyle is one of the key factors that can trigger or favor several dysfunctions in the human body, dysfunctions that have a negative impact on the respective individual's health. The main objective of this research is to improve health in elderly people, by initiating gymnastic programs, carried out both in an organized way and as independent activities. The inquired sample consisted in 25 elderly people who attended two fitness classes per week and a stretching program, carried out individually, as an independent, home-based, activity. Results. A constant and regular fitness program improves the activity of the circulatory system, seen through an increase in effort capacity, a major prophylactic element for cardiovascular diseases.*

Conclusions. Summing up our study, in order to highlight the benefits of gymnastic activities for life extension and anti-aging prevention, it can be concluded that gymnastic activities are beneficial for the body, both physically and psychologically.

Key words: *gymnastics, benefits, elderly people.*

1. Introduction

The 21st century seems to be the aging of mankind. It is estimated that in 2025 more than one billion inhabitants of the planet will be over 60 years old. The process will be more pronounced in the developed countries due to the increase in life expectancy. It can reach 4-5 billion elderly people. In the world over 2/3 of the elderly persons do not regularly perform physical activities.

The aging process is characterized by a large number of specific structural and functional changes. Research in the last 50-60 years has enormously clarified many aspects of aging (thus delineating and

developing the geriatric field), which are strictly related to the issue of physical activity in the elderly.

Sport means longevity. Researchers in the UK have found that physical activities that are constantly practiced for fifteen minutes a day can increase life expectancy by an average of three years while watching television for six hours a day can reduce it by five years, due to the physical inactivity generated by this occupation.

The lifestyle is one of the key factors that can trigger or favor several dysfunctions in the human body, dysfunctions that have a negative impact on the individual's health.

Gerontology research has shown that

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movement is one of the prolongers of life, but it is mainly the primary factor for those who have reached a high age, a physical condition that gives them not only subjective comfort but also necessary independence in the social environment or family in which they live.

People who practice vigorous physical activities, regardless of age, will have valuable health benefits, and these will continue if they continue this practice throughout their lives.

2. Purpose

The main objective of this research is to improve health in elderly people, by initiating gymnastic programs, carried out both in an organized way and as independent activities.

3. The Research Tasks

- Consulting the bibliographic material;
- establishing the duration of the experiment;
- Sampling and selection of subjects in order to include them in the two experimental and control groups;
- Identify physical activities that can be practiced in your spare time.
- Development of differentiated modular programs, according to individual peculiarities;
- Applying the longevity test;
- Preparation, analysis and interpretation of the recorded results
- Create tables and graphs to present the results in a clear and concise form;
- Drawing up the conclusions.

4. Research Methods

As research methods we used: the bibliographic study, the experimental

method, the survey method, the statistical - mathematical method and the graphical representation. The evaluation of longevity was done through the survey method.

The longevity assessment test comprises 20 items that allowed a certain health assessment to be carried out. Also, the items refer to the consumption of fruits, vegetables, fresh food, tea, coffee, alcohol, medicines, future projects, exercise practice, etc.

5. Research Hypothesis

If a gymnastics program is applied systematically and continuously, the health and physical condition is improved and the quality of life improves for elderly people .

6. Organizing Experimental Research

This paper is part of a wider study that aims to investigate the influence of practicing gymnastics (in different forms) upon the quality of life (by subjective indicators).

A group of 60 subjects, aged between 60-80 years old, of whom 30 were female who regularly have practiced exercise for many years, participated in the experimental research.

Upon the experimental group intervened the application of the independent variable, named the "Program for optimizing the quality of life", which was carried out in the sports base of the Bucharest Ministry of Transportation.

The sample surveyed participated in two weekly gymnastics classes and an exercise program (stretching and 30 minutes walking daily), executed individually as an independent activity, at home. The therapeutic strategies will be adapted to the age of the participants , their individual particularities, and their associated illnesses.

Stretching exercises, which may be static or dynamic, affect the locomotor system, especially muscle elasticity and suppleness, also affecting the body posture and the breath, as well as the entire physical and mental relaxation.

7. Results

The results of the Chi square test show significant differences between the "YES" or "NO" responses given by the elderly subjects participating in the questionnaire. The significance threshold $p < 0.001 < 0.05$ for $\chi^2 = 173.17$ and a degree of freedom ($df = 1$). From table no. 1 but also from the

chart in fig. 1, we observe the major differences between the "YES" and "NO" responses to the longevity test given by the components of the Experiment and Control groups respectively.

A constant and regular fitness program improves the activity of the circulatory system, seen through an increase in effort capacity, a major prophylactic element for cardiovascular diseases.

Abdominal fat loss and increased abdominal muscle tone have favorable effects on spinal biomechanics, and can therefore be considered prophylactic elements of spine disorders.

The results of the longevity test questionnaire

Table 1

Crt. No.	Group	Answer	Answer options		TOTAL per group
			YES	NO	
1	Experiment	Observed (recorded)	552	48	600
		Theoretical	454.79	145.21	600
		Contribution Chi square	20.78	65.08	85.86
		%	92%	8%	100%
2	Control	Observed (recorded)	350	240	590
		Theoretical	447.21	142.79	590
		Contribution Chi square	21.13	66.18	87.31
		%	59%	41%	100%
TOTAL recorded responses			902	288	1190

Longevity test results

Table 1

Parameters	Values
Chi square (χ^2)	173.17
df	1
P	<0.001

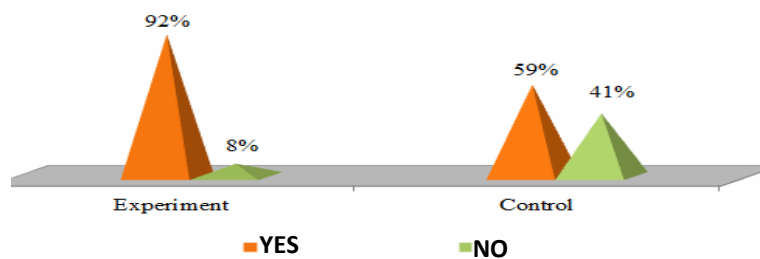


Fig. 1. Graphical representation of the longevity test result

8. Discussions

The Gerontologists claim that lifestyle determines longevity and life expectancy at about 35%. Physical activity is considered an important factor in lifestyle. There are a number of arguments in support of these statements.

Thus, historical or anthropological studies reveal that the ancient peoples lived longer, because they were active, and that the primitive populations of Amazonia or Africa had a greater life expectancy and longevity than the sedentary people living in cities. The human being is not a mere representative of the animal kingdom, but an individual who can influence his own life even in the sense of time, and then "human" arguments are sought. In this respect, the people who live in the middle of nature enjoy a long life.: the shepherds in the Andes, the Carpathians or the Caucasus, or the farmers in the isolated villages situated in the hills or in the mountains.

One thing is certain. It must be intervened by all means to maintain as much as possible the state of health and the physical condition of the elderly, and it is obvious that movement and physical activities are the most accessible, agreeable and effective means we have.

9. Conclusion

Summing up our study, in order to highlight the benefits of gymnastic activities for life extension and anti-aging prevention, it can be concluded that gymnastic activities are beneficial for the body, both physically and psychologically.

The survey amongst the elderly people highlighted that practicing physical activities consistently leads to improved health and physical condition as well as comfort, good mood, optimism, improvement of intellectual activity. The study also showed satisfactory results among elderly people,

who have improved their resistance to exercise following systematic physical exercise.

Summing up the study to highlight the benefits of body activities and a healthy lifestyle to combat aging, it can be concluded that physical activity has a beneficial role for the body, both physically and mentally. In a word we can say that these people's physical activities have improved the quality of their lives.

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