

EFFECTS OF KINETIC PROGRAMS IMPLEMENTATION ON THE QUALITY OF LIFE OF STUDENTS WITH VERTEBRAL STATIC DISORDER

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Abstract: *Introduction.* Health is one of the important components of the quality of life. **Research Methods Used:** *Specialized Documentation. Experimental method. Method of measurement and testing. The statistical-mathematical method. Graphic representation method.* **Research results.** *At baseline testing, mean values are close to both groups; the final typing shows significant differences between the two groups.* **Conclusions.** *Following the application of well-dosed and individualized kinetic treatment, the pain intensity was reduced and the spinal mobility improved to normal.*

Key words: *kinetotherapy, static vertebral disorders, quality of life, students.*

1. Introduction

Health is one of the important components of the quality of life. The work brings back the issue of static vertebral disorders at a time when statistics reveal alarming increases in these physical deficiencies in all age groups, but especially in young people. The basic means for correcting vertebral static disorders is the corrective exercise. [2].

Most young people do not really take the fact that going straight, with their shoulders at the same level, not only gives

you "grace", but also the health of the spine.

Quality of life is a relatively new assessment concept. In increasing the quality of life one can notice two distinct sides:

- on the one hand, improving the objective living conditions in the perspective of human needs;
- on the other hand, improving the styles and lifestyles.

The indicator of the quality of life most difficult to assess is the determination of the latter component. This requires that man increasingly become aware of all the

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components that contribute to defining the quality of his life, both as an individual and as a member of society [6].

2. The aim of the Research

The aim of the research is also to highlight the impact of kinetotherapy-specific means on students with static vertebral disorders and to follow certain parameters of quality of life that can be influenced by the implementation of gymnastic and therapeutic swimming programs.

3. Research Hypothesis

Applying combined therapies, gymnastics and therapeutic swimming therapy, the efficiency of the recovery process will be greater and a correction of body posture will be achieved, contributing to improving the quality of life.

4. Research Methods

Research Methods: Pedagogical Documentation, Questionnaire Survey: (Cohen Williamson Questionnaire for Self-Assessment of Stress Level), Statistical-Mathematical Method and Graphic

Representation Method;

5. Organization of Research

The experimental research was carried out in a sports base of the University of Bucharest and the "Steaua" basin. with 40 students of the University of Bucharest, enrolled in the medical gymnastics and therapeutic swimming, between October 2015 and May 2016. The functional evaluation included tests for the measurement and evaluation of pain and amplitude of movement [5].

At the beginning and end of the recovery period, the following tests were performed: Spinal column examination by executing the flexion movement at the column level and measuring the fingers-to-ground distance, and for testing the "pain" parameter a scale of 0 at 5. where 5 is severe pain, and 0, no pain.

6. Research Results

We present the comparative analysis of the results obtained in the motor evaluation of the students with physical deficiencies in the spine (experimental group - control group), the final testing;

The following changes occurred following the experiment:

Table 1

INDICATOR TEST "Fingers - Ground"

GROUPS	Media	Dif. medii (E-C)	Median	Ab. standard	Minim	Maxim	Amplitude	Coef. variation
Experiment	-2.46	2.22	-2.4	0.31	-3.2	-2.1	1.1	-12.6%
Control	-4.68		-4.6	0.44	-5.8	-4.0	1.8	-9.3%

Bilateral individual test

Table 2

Levene test for dispersion equality		Equal Dispersions?	Test t for media equality				Effect size
F	Sig.		Average difference	t	df	p	
3.1009	0.084	DA	2.22	22.652	58	<0.001	5.85

In the "fingers - soil" test, the mean average is equal to -2.46 in the experiment group, respectively, -4.68 in the control group. The mean of the experimental group is higher by 2.22 (47.4%). The magnitude of the effect (5.85) shows a very large difference between the averages of the two groups. The data dispersion in both tests is homogeneous. According to the Levene test for homogeneity of dispersions, the

two groups have equal dispersions, Sig = 0.084 > 0.05. The t independent test for equal dispersions with $p < 0.001 < 0.05$ and $df = 58$ shows a statistically significant difference between the two groups on the "fingers-soil" average index. The research hypothesis is accepted. The graph with the individual values recorded for the fingers - soil index test and the mids of the two groups is shown in Figure 1.

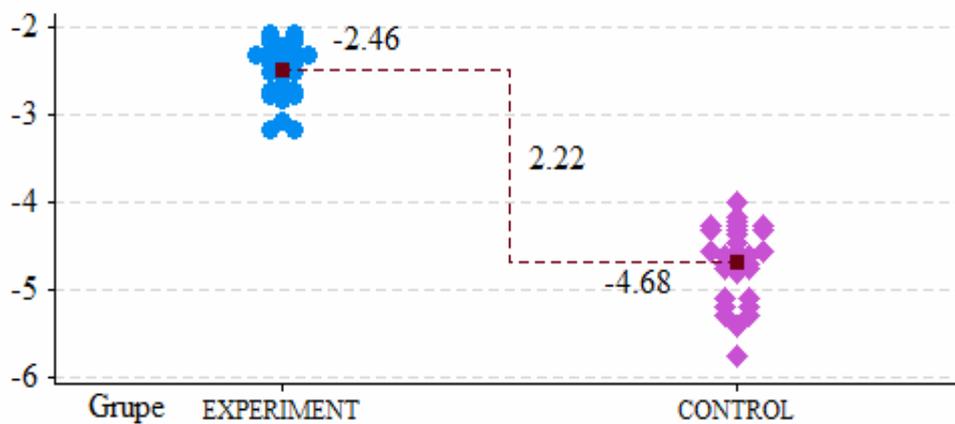


Fig. 1. Index "Fingers Ground"

INTENSITY OF PAIN

Table 3

GROUPS	Media	Dif. medii (E-C)	Median	Ab. standard	Minim	Maxim	Amplitude	Coef. variation
Experiment	1.51	-1.05	1.4	0.55	0.8	2.7	1.9	36.1%
Control	2.56		2.5	0.36	1.7	3.3	1.7	14.0%

TEST t INDEPENDENT BILATERAL

Table 4

Levene test for dispersion equality		Equal Dispersions?	Test t for media equality				Effect size
F	Sig.		Average difference	t	df	P	
5.4364	0.023	NU	-1.05	8.378	50	<0.001	2.27

The mean pain intensity is 1.51 in the experimental group and 2.56 in the control group. The mean of the experimental group is less than 1.05 (41.0%). The magnitude of the effect (2.27) shows a very large difference between the averages of the two groups. Scatter dispersion is non-homogeneous in the experimental group and homogeneous in the control group. According to the Levene test for homogeneity of dispersions, the two

groups do not have equal dispersions, Sig = 0.023 < 0.05. The independent t test for unparalleled dispersions with $p < 0.001 < 0.05$ and $df = 50$ shows a statistically significant difference between the two groups on pain intensity. The research hypothesis is accepted. The graph with the individual values recorded for the pain intensity of the two groups and the related environments is shown in Figure 2.

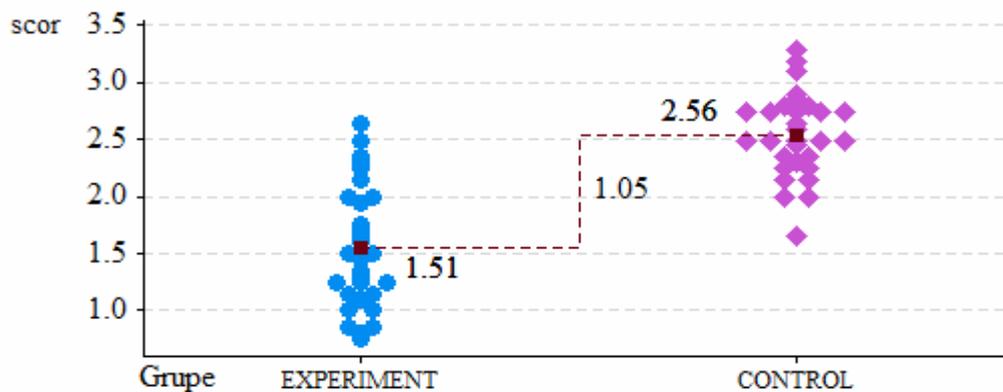


Fig. 2. Intensity of pain

Using individualized programs respecting the principle of progressiveness, both aggravated and lasting, we found the following:

The results obtained showed that at the end of the academic year the intensity of the pain decreased significantly, especially in the experimental group due to the

application of the therapeutic programs, the decrease being higher in the experimental group where combined medical gymnastics and therapeutic swimming programs were used.

Both the experimental and control groups had superior environments to final testing than the initial test, for each

indicator considered, but in different proportions. The progress of the experimental group over the control group proves the efficiency of the methodical procedures and the combined gymnastics and swimming programs used for the experimental group [3].

7. Conclusions

Conclusions on "Assessing the Motricity Level of Students with Physical Deficiencies" From the results of the experiment, I highlight the following conclusions:

- Following the application of well-dosed and individualized kinetic treatment, the pain intensity was reduced and the spinal mobility improved to normal values.
- The kinetotherapeutic means used contribute to the maintenance of the functional parameters at the limits close to normal;
- Structuring a well-dosed and individualized kinetotherapy recovery program and applying it with perseverance and continuity, help relieve pain, improve joint mobility, increase muscle strength, and enable proper socioprofessional work [4].
- We believe that postural deficiencies are a chapter open to permanent exploration and uninterrupted search for finding the most effective techniques and methods. Proper programs can only be made if these deviations are viewed as a whole and the multitude and complexity of their aspects are taken into account.
- Choosing the most effective means of corrective gymnastics (under their

different forms) and swimming in physical education and sports lessons in higher education, as well as their judicious dosing, leads to achieving higher levels of perception of the quality of life.

8. Proposals

As Romania faces a record number of vertebral deficiencies, placing Europe first in the incidence of these conditions, the authorities should resort to some urgent measures, including:

- Medical check-up at the beginning of the school and university year for the early detection of deficiencies;
- Students who are exempted from physical education be enrolled in medical recovery programs;
- The existence of physical therapy rooms in schools and universities;
- Informing students about health and the risks of timely untreatment of vicious attitudes, knowing that the age at which deficiency is discovered is one of the most important elements of prognosis.

Prevention programs for vertebral static disorders by increasing the number of hours allocated to physical activities in order to strengthen the spine muscles.

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