THE IMPORTANCE OF SWIMMING TECHNICS IN PHYSICAL DISABILITIES RECOVERY

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Cuvinte cheie: **kyphosis, lordosis, scoliosis, therapeutic swimming, recovery**

Abstract: This study aims primarily to determine the role that therapeutic swimming has in recovering the main physical impairment. The main functional impairments we have chosen are: kyphosis, lordosis and scoliosis. These deficiencies affect many people: children, young people, adults and even the elderly. The study includes 6 patients, 3 who were included in the experimental group and three included in the control group. Subjects within the experimental group were included in the water exercise recovery program and techniques specific to swimming therapy. They experienced markedly faster progress than those in the control group who followed only kinesiotherapy recovery therapy.

Introduction

Posture deficiency is defined as deviation from the normal, physical and physical functions of the body that disturb the normal growth and harmonious development of the body, altering the external aspect, reducing the ability and power to adapt to physical effort, diminishing productive work ability. (Dominteanu, T., 2005, Fozza, c. A., 2002).

Functional physical deficiencies that are presented in this study are: kyphosis, lordosis and scoliosis. These are physical defects in the spine.

Kyphosis is a curvature of the spine in the anterior-posterior plane, with the convexity of the curvature facing the rear. These are the most frequent and typical deviations of the spine that can take different shapes and characters depending on the causes and mechanisms of production, the extent and location of the vertebral column, the evolution and the possibilities for correction. (Dominteanu, T., 2008).

The literature recognizes several types of kyphosis: functional kyphosis (kyphotic attitude, kyphosis habitual, professional, compensatory) and pathological kyphosis (kyphosis congenital rickets, paralytic, traumatic psychoneurotics, rheumatic tracks, etc.).

Lordosis is a deviation of the spine in the antero-posterior plane, the convexity of the curvature is directed previously. Evolution of lordosis is largely favorable, they do not reach too much deformation, compensate and balance quite quickly (Mureşan, E. şi colab. 2006).

Like the kyphosis, the lordosis can be functional (lordosis attitude, habitual lords, compensatory, professional) and pathological (congenital, paralytic, myopathy, etc.).

Professor Adrian Ionescu defined scoliosis as "a steady deviation of the spine in the frontal plane, which can be achieved in the form of a single lateral inclination, a partial or total bumping, or a system of two or more curves in the opposite direction". Scoliosis may be functional (scoliotics attitude, scholia through skills, static, professional) and pathological (rahitika, paralytic, pleuretic, rheumatic, traumatic, etc.) (Dominteanu, T., 2008).

Methods

The research methods included in this study were: study of specialized literature, discussions with specialists in the field, test method, experimental method, graphic representation method, etc.

Six male subjects were included in this study, 3 were included in the experimental group and 3 were in the control group. All six subjects followed a kinesiotherapy recovery program, each for its affection, but those in the experimental group also developed a therapeutic swimming program.

	Name	Age	Disabilities
Experimental group	N.G.	12 years	Thoracic kyphosis
	D. B.	11 years	Lumbar lordosis
	L. A.	13 years	Scoliosis "C", left
Control group	B. R.	12 years	Thoracic kyphosis
	L. D.	12 years	Lumbar lordosis
	M. M.	11 years	Scoliosis in "C", right

Table 1. Subjects within experimental and control groups

As far as the tests are concerned, all six patients were evaluated and measured, the parameters retained for this study included: degree of spine mobility, pain, pathological curvature.

All 6 subjects achieved the treatment program for 5 weeks with 4 sessions each week, and each treatment session lasted for the

experimental group for 80 minutes and for the control group for 50 minutes.

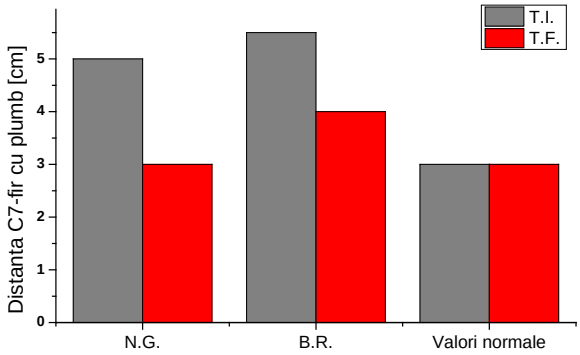
Results and conclusion

The results obtained in the initial and final testing of the subjects were entered into a table and then plotted. Subjects within the experimental group had a greater evolution in measured parameters than those in the control group.

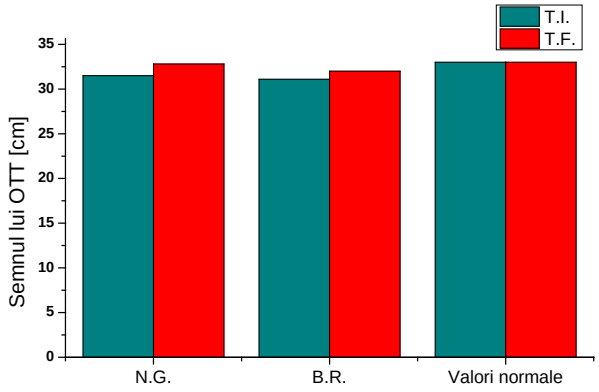
The table below represents the results of patients with cystosis in the proposed tests.

Tests / Subject	N.G (experimental group)		B.R.(control group)		Normal values
	I.T.	F.T	I.T	F.T.	
Distance C7 - lead wire (cm)	5	3	5,5	4	3
D. L1-fir (cm)	5,4	4	5,9	4,8	4
D. occiput - wall (cm)	4	0,5	4,5	1,3	0
OTT Sign (cm)	31,5	32,8	31,1	32	33
Pain level	3	0	3	1	0

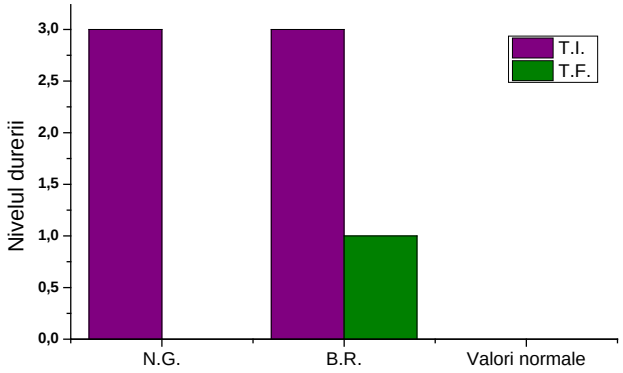
Table 2. Results subjects with thoracic kyphosis



Graphic 1. Representation of test values of distance between C7 and lead wire



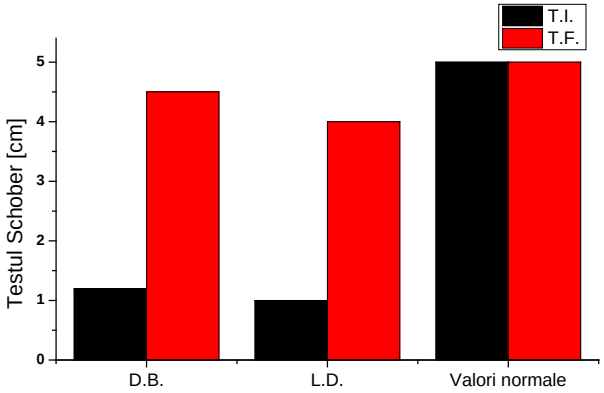
Graphic 2. Representation of OTT Signs



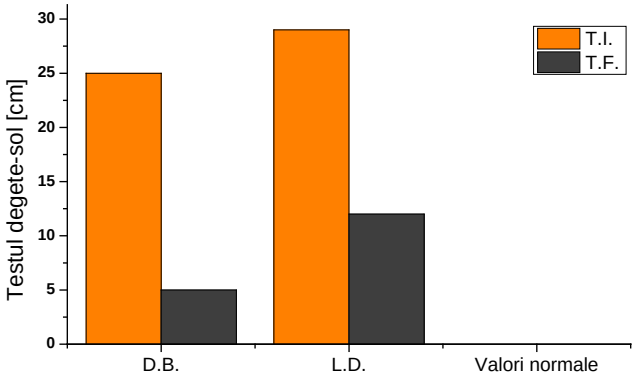
Graphic 3. Representation of pain values

Tests / Subject	D.B.(experimental group)		L.D.(control group)		Normal values
	T.I.	T.F.	T.I.	T.F.	
Schober test(cm)	1,2	4,5	1	4	5
Stibor test (cm)	7	10	6,8	9,6	> 10
Finger-to-ground test (cm)	25	5	29	12	0
Pain	4	0	4	1	0

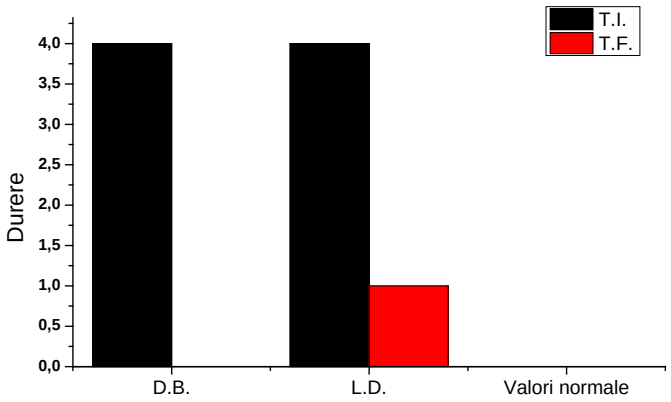
Table 3. Results of subjects with lumbar lordosis



Graphic 4. Representation of the Schober test values



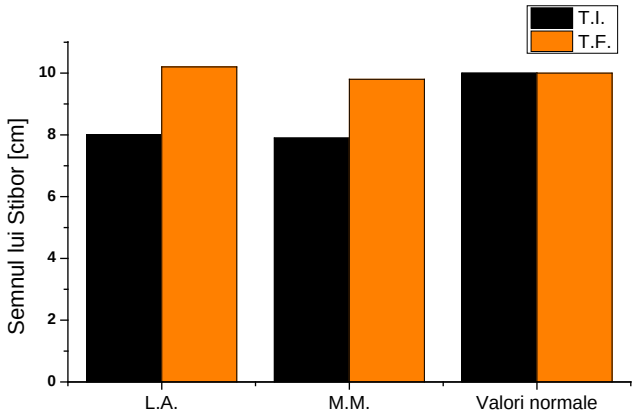
Graphic 5. Representation of the fingers-soil test values



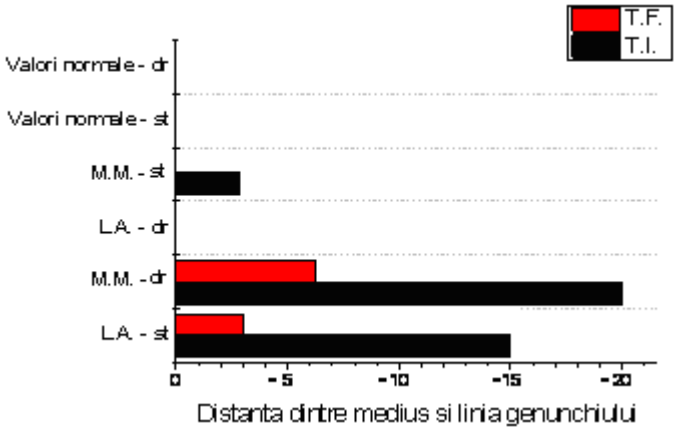
Graphic 6. Representation of pain values

Tests / Subject	L.A.(experimental group)		M.M.(control group)		Normal values
	T.I.	T.F.	T.I.	T.F.	
OTT test (cm)	26	32	24	30	33
Schober test (cm)	3,9	4,8	3,5	4,1	5
Stibor test (cm)	8	10,2	7,9	9,8	> 10
The distance between the medus and the knee line	St. -15	-3	-3	0	0
	Dr. 0	0	-20	-6	0
Pain	3	0	3	0	0

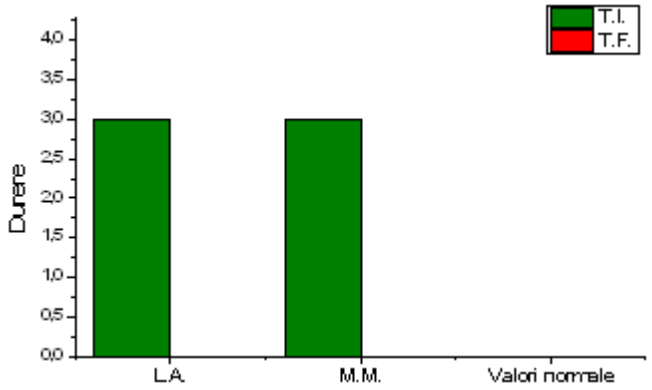
Table 4. The results of subjects with scoliosis "C"



Graphic 7. Representing the values of Stibor's sign



Graphic 8. Representing the values of the distance between the medus and the knee line



Graphic 9. Representation of pain values

The results show that those in the experimental group who had included in the treatment program and therapeutic swimming as a means of recovery had a faster progression than the others, the values obtained by them being normal or very close to the normal due to the period short rehabilitation.

The use of swimming means in the complex therapy of physical therapy proves its effectiveness in correcting the physical deficiencies, both by the positive influences of the appropriate technical procedures and by increasing the objectivity of the correction sessions, to which the subjects participate with a higher interest. (Bălan, V., 2007).

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ROLUL INOTULUI TERAPEUTIC IN RECUPERAREA PRINCIPALELOR DEFICIENTE FIZICE FUNCTIONALE

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Cuvinte cheie: **cifoză, lordoză, scolioză, înot terapeutic, recuperare**

Rezumat: Acest studiu are ca scop principal determinarea rolului pe care înotul terapeutic îl are în recuperarea principalelor deficienţe fizice funcţionare. Principalele deficienţe fizice funcţionale pe care le-am ales sunt: cifoza, lordoza şi scolioza. Aceste deficienţe afectează foarte multe persoane: copii, tineri, adulţi şi chiar bătrâni.

Studiul include 6 pacienţi, 3 care au fost incluşi în grupul experimental şi trei incluşi în grupul martor. Subiecţii din cadrul grupului experimental li s-au inclus în programul de recuperare exerciţii în apă şi tehnici specifice înotului terapeutic. Aceştia au înregistrat progrese vizibil mai rapide decât cei din cadrul grupului martor care au urmat ca si terapie de recuperare doar kinetoterapia.