

## THE IMPACT OF CLINICAL PILATES ON QUALITY OF LIFE AND FUNCTIONALITY OF THE PELVIC FLOOR IN WOMEN WITH URINARY INCONTINENCE

### Hypothesis / aims of study

Urinary incontinence (UI) is considered a public health problem due to its prevalence and impact in all dimensions of health. It is consensual the positive effect of clinical Pilates on the abdominal core of healthy women, however in this type of condition there is no evidence. Objectives: To evaluate the impact of Clinical Pilates on the functionality of pelvic floor muscles and Quality of Life in women with urinary incontinence.

### Study design, materials and methods

Quasi-experimental study was conducted in a consecutive sample of 60 women aged  $\geq 50$  years and diagnosis of stress or mixed UI and grade  $\geq 3$  on the modified Oxford scale. The sample was divided into two groups: experimental group (EG; n = 30) and control group (CG; n = 30), this study has 80.0% power to detect an effect size of  $E = S * E/S = 0.736$ . The EG performed Clinical Pilates sessions for 60-minutes, twice a week during ten weeks. The impact of the Pilates method on the functionality of the pelvic floor, through the Broome Self-Efficacy Scale, and the Quality of Life by means of the Ditrovie Scale was evaluated. We used descriptive and inferential statistics (Parametric T-Student and Wilcoxon and Mann-Whitney non-parametric tests, with  $\alpha = 0.05$ ).

### Results

Table 1- Clinical Pilates effect on Quality of life of women with Urinary Incontinence at baseline (M0) and post intervention (M1)

Dimensions of the Ditrovie Scale	Baseline (M0)			Post intervention (M1)		
	GC	GE	p	GC	GE	p
Activity*	2,5 (1)	2,5 (1,25)	0.789	2,63 (1)	1,75 (1)	<0.001
Self image*	2,5 (1,5)	2 (2)	0.197	2,5 (1,5)	1,25 (1)	<0.001
Emotional Impact*	2 (1,5)	2 (2,5)	0.473	2,5 (1)	1 (0,5)	<0.001
Sleep*	2,5 (1)	2 (1)	0.271	3 (1)	1 (1)	<0.001
Welfare*	3 (1)	3 (1)	0.082	4 (1)	2 (0)	<0.001
Quality of life (Final score)*	2,35 (1)	2,3 (1,1)	0,347	2,7 (0,9)	1,7 (0,7)	<0.001

\*median and interquartile deviation

EG - experimental group; CG- control group

Table 2- Clinical Pilates effect on functionality of the pelvic floor in women with Urinary Incontinence at baseline (M0) and post intervention (M1)

Parts of the Broome Scale	Baseline (M0)			Post intervention (M1)		
	CG	EG	p	CG	EG	p
Part A*	35,71 (20) <sup>b</sup>	43,93 (41,43) <sup>b</sup>	0,329	35,36 (18,57) <sup>b</sup>	80,71 (9,29) <sup>b</sup>	<0,001
Part B**	35,9 $\pm$ 13,88 <sup>a</sup>	45 $\pm$ 22,11 <sup>a</sup>	0,063	33,9 $\pm$ 13,59 <sup>a</sup>	77,6 $\pm$ 11,06 <sup>a</sup>	<0,001
Final score (A + B)	37,65 $\pm$ 11,56 <sup>a</sup>	46,73 $\pm$ 21,77 <sup>a</sup>	0,050	35,92 $\pm$ 11,44 <sup>a</sup>	78,99 $\pm$ 10,48 <sup>a</sup>	<0,001

<sup>a</sup> Mean value and standard deviation; <sup>b</sup> Median value and interquartile deviation

EG - experimental group; CG- control group

\*Part A (Contraction of the pelvic muscles without loss of urine); \*\*Part B (Contraction of the pelvic muscles as prevention of loss of urine)

#### Interpretation of results

Significant differences were observed between EG and CG, with EG showing a better perception of pelvic floor muscles contraction  $78.99 \pm 10.48$  vs.  $35.92 \pm 11.44$ ,  $p < 0.001$ ) and better Quality of Life [2.7 (0.9) vs 1.7 (0.7);  $P < 0.001$ ].

#### Concluding message

Clinical Pilates method was positively influenced the perception of pelvic floor muscles contraction as well as the quality of life in women with urinary incontinence.

#### Disclosures

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