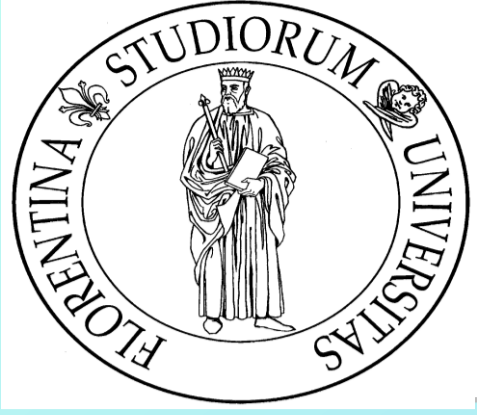


Efficacy of rehabilitation with Tai Ji Quan on disability, quality of life, pain, psychological distress, sleep in an Italian cohort of patients with Fibromyalgia Syndrome



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Angela Del Rosso, Gianluca Paoletti, Michele Calà, Susanna Maddali Bongi
Division of Rheumatology, Department of Experimental and Clinical Medicine, University of Florence, Italy

INTRODUCTION

- **Fibromyalgia syndrome (FMS)** is characterized by chronic widespread musculoskeletal pain and muscle tenderness leading to disability, impaired quality of life (QoL), fatigue, and it is accompanied by sleep disorders and psychological distress.
- The **Tai Ji Quan** is a Chinese martial art that, integrating meditation, slow movements, deep breathing and relaxation, that contributes to the distribution of Qi (vital breath) throughout the body.
- Some studies showed that Tai Ji Quan, in patients with rheumatic diseases and FMS, improved QoL, disability, and psychological distress (1-2).

AIM

To evaluate the efficacy of Tai Ji Quan on disability, QoL, fatigue, sleep and psychological distress in an Italian cohort of FMS patients.

METHODS

We enrolled 22 FMS patients (16 women and 6 men; age: 52,24 ± 12,19 years; symptom onset: 8,2 ± 5,39 years; diagnosis: 3,25 ± 2,97 years). 11 patients (Experimental Group) participated to a course of **Tai Ji Quan** Yang style of 17 lessons (1/week, 60 minutes each); 11 patients (Control Group) participated to an **educational course** about FMS (17 lessons; 1/week, 60 minutes each). At the enrollment (T0) and at the end of treatment (T1), all FMS patients were evaluated for disability, [Fibromyalgia Impact Questionnaire (FIQ) Health Assessment Questionnaire (HAQ)], QoL [Short-Form 36 (SF36)], fatigue [Functional Assessment of Chronic Illness-Fatigue (FACIT-F)], pain [Widespread Pain Index (WPI)], tenderness [Tender Points (TP)], Sleep Quality [Pittsburgh Sleep Quality Index (PSQI)] and mood disorders [Hospital Anxiety and Depression Scale (HADS)].

Tai Chi intervention

Each lesson, (1 hour/week) is divided into 3 parts.

- 1) (15 minutes): includes warm up, work aimed to improve body motor schemes and work on the intention (**Yi Gong**).
- 2) (15 minutes), includes **Qi Gong** practice. Qi Gong is a Chinese therapeutic gymnastics, whose low impact exercises are aimed to improve greater control of posture, breathing and concentration.
- 3) (30 minutes) includes the study and practice of the **Form** with bare hands: this consists in a sequence of movements performed according to well-defined principles, which reflects an "imaginary battle" with a hypothetical opponent, in which mind and body work together and, through breathing, allow the circulation of Qi in all body areas.

RESULTS

- **At T0**, all parameters of FMS patients were similar in the 2 groups.
- **At T1** versus T0, patients of the **Experimental Group** improved significantly in FIQ (P= 0.019), SF36 Summary Physical Index (P= 0.016), WPI (P= 0.037), tender points (P= 0.0035), PSQI total (P = 0.044) and PSQI sleep duration (P= 0.025) HADS (total score: P= 0.015; anxiety subscale: P=0.028) (**Table**).
- **At T1** versus T0 Patients in the **Control Group** did not improve in any parameter.

References

- 1) Wang C.C, et al. Rheum Dis Clin North Am, 2011;
- 2) Wang C.C, et al. N Engl J Med. 2010

Table- Effects of Tai Ji Quan in FMS patients of Experimental Group

Parameter	T0 (Mean ± SD)	T1 (Mean ± SD)	P-value T0 vs T1
Fibromyalgia Impact Questionnaire	54.33 ± 14.61	43.98 ± 16.82	0.019
Short Form-36 (Summary Physical Index)	35.36 ± 6.70	38.82 ± 5.36	0.016
Short Form-36 (Summary Mental Index)	31.64 ± 7,45	36.00 ± 6.68	NS
Health Assessment Questionnaire	0.56 ± 0.42	0.44 ± 0.39	NS
Functional Assessment Chronic Illness-Fatigue	20.55 ± 9.11	16.45 ± 8.14	NS
Pittsburgh Sleep Quality Index (PSQI)	10.45 ± 2.62	8.73 ± 3.66	0.044
PSQI Sleep quality	1.54 ± 0.69	1.36 ± 0.81	NS
PSQI Sleep latency	1.27 ± 1,01	1.00 ± 1.00	NS
PSQI Sleep duration	1.73 ± 1,10	1.18 ± 1.08	0.025
PSQI Sleep efficiency	1.18 ± 1.17	1.09 ± 0.94	NS
PSQI Sleep disturbance	2.00 ± 0.45	1.72 ± 0.47	NS
PSQI use of sleeping medication	1.00 ± 1,41	0.91 ± 1.37	NS
PSQI daytime dysfunction	1.73 ± 0,79	1.45 ± 0.82	NS
Hospital Anxiety and Depression Scale (HADS) total	19.36 ± 6.71	15.00 ± 5.85	0.015
HADS anxiety	10.91 ± 4.59	8.64 ± 4.06	0.028
HADS depression	8.45 ± 3.42	6.36 ± 2.01	NS
Widespread Pain Index	11.91 ± 4.25	9.64 ± 4.46	0.037
Tender Points	12.27 ± 4,58	8.64 ± 4.67	0.0035

CONCLUSIONS

- In our FMS patients, Tai Ji Quan improved disability, QoL, psychological distress, sleep quality and pain.
- Our data confirm Tai Ji Quan as an effective rehabilitation method for treating FMS patients.
- However, our results should be confirmed by further long-term studies, with follow-up evaluations, in larger populations.