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SHORT COMMUNICATION

EFFICACY AND FEASIBILITY OF A COMBINATION OF BODY AWARENESS THERAPY AND QIGONG IN PATIENTS WITH FIBROMYALGIA: A PILOT STUDY

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Objective: **To evaluate the effects of body awareness therapy combined with qigong for patients with fibromyalgia.**
Design: **A controlled randomized pilot study.**
Subjects: **Thirty-six female patients with fibromyalgia were randomized to either qigong plus body awareness therapy (n = 19) or a control group (n = 17).**
Methods: **The programme was conducted once a week over a period of 3 months. The outcome measures were an observational method called the Body Awareness Rating Scale, the Fibromyalgia Impact Questionnaire and 2 tests of physical function. An interview was conducted with the patients in the treatment group.**
Results: **Seven patients in each group (39%) were lost to the post-test examination. The inter-group analysis revealed a significant improvement in movement harmony for the treatment group (p = 0.03), while no differences were found in the Fibromyalgia Impact Questionnaire or the functional tests. The intra-group analysis revealed an improvement in movement harmony for the treatment group (p = 0.01), while the total score of the Fibromyalgia Impact Questionnaire deteriorated (p = 0.04) in the control group. The interviews indicated that several patients had experienced exacerbation of symptoms while standing still, and/or difficulty in concentrating on the movements.**
Conclusions: **Although improvement in movement harmony occurred in the patients completing the treatment programme, no improvement was found for fibromyalgia symptoms or physical function.**

Key words: fibromyalgia, pain, therapy, body awareness, qigong.

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INTRODUCTION

Patients with fibromyalgia (FM) suffer from chronic, widespread pain and fatigue, often accompanied by stiffness, sleep disturbances and distress (1). Aerobic exercise and/or education have been shown to improve function, symptoms, distress and well-being (2). In Sweden, physiotherapy for patients with psychosomatic disorders and pain conditions commonly also include body awareness therapy, which aims to augment mental awareness, movement harmony, concentration and peacefulness. Many body awareness therapies have been developed from ancient Asian meditation practices, such as qigong and tai chi, which have become increasingly popular in Sweden. Improvements in global health, symptoms, self-efficacy (3), quality of movement and vegetative disturbances (4) have been reported in previous studies evaluating body awareness therapies for patients with FM. The aim of this pilot study was to identify an appropriate mode of qigong for patients with FM to be studied in a larger study, and to evaluate the effects of body harmony therapy and qigong on movement harmony and symptoms.

METHODS

Subjects

The criteria for inclusion were: women with ages ranging from 18 to 65 years, fulfilling the ACR 1990 criteria for FM (1) and speaking Swedish. The study population comprised 36 female patients with FM fulfilling the ACR criteria. Their mean age was 45 years (SD 8.3), the mean symptom duration was 10 years (SD 8.5) and the mean number of tender points was 16 (SD 2.0). Fifty percent of them were working or studying either full-time or part-time. Forty-seven percent were receiving full-time and 44% part-time compensation for sick leave or a disability pension. Fifty percent used analgesics and 56% anti-depressive medicines or sedatives. Eight patients had been born outside Sweden. The patients were randomized to either a treatment group (n = 19) or a control group (n = 17). No differences in the demographic data were found between the 2 groups. The control group was asked to continue with their normal daily activities without any changes. All the patients were asked not to change their medication during the study period. The study was approved by the ethics committee at the Sahlgrenska Academy, Göteborg University, and the patients gave their written consent.

Treatment programme

The treatment programme was led by a physiotherapist. Each lecture lasted 1.5 hours and lectures were given once a week to groups of 8–10 patients over a period of 3 months, comprising 14 sessions. The sessions were initiated with body awareness therapy. Body awareness therapy comprised various breathing and postural techniques and qigong. Relaxation, grounding, breathing and concentration were performed

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either in a supine or standing position. The qigong movements were performed for 20 minutes while standing still, focusing on relaxation, grounding and concentration. The movements were individually modified to match the functional limitations of the patients. The sessions were completed with a short discussion about the movements. The patients received a tape recording with instructions for the qigong movements and were encouraged by the physiotherapist to perform them at home, as a complement to the therapy sessions once a week.

Measurements

The outcome assessor was blinded to the patients' group membership. The Body Awareness Rating Scale (BARS) and the Fibromyalgia Impact Questionnaire (FIQ) were chosen as primary outcome measures. The BARS (5) is an observational method for assessing movement harmony, and the scale ranges from 1 to 7, where 1 indicates large aberrations and 7 optimal performance of the movement. The total score is the mean of the 7 subscales within the instrument. The FIQ (6) is a self-administered questionnaire, comprising 10 subscales relating to the disorder in terms of disabilities and symptoms. The total score is the mean value of the subscales within the questionnaire. Two tests for muscle function were included as secondary outcome measures to assess the potential strengthening effects of the qigong-body awareness treatment. The maximum grip strength during 10 seconds was measured with a Grippit measure (7). The function of the lower extremities was measured by means of the Chair Test, counting the number of times the subject stood up during a period of 1 minute (8).

Interviews. A semi-structured interview was conducted with the patients in the treatment group, focusing on the experience of the treatment sessions.

Statistics

Wilcoxon's signed rank test was used in the intra-group analysis over time, while the Mann-Whitney-U test was used for inter-group analysis. For dichotomous variables, Fisher's exact test was used, whereas the chi-square test was used for categorical variables when comparing the demographic data of the groups. All the tests were two-tailed and conducted at the 5% significance level.

RESULTS

Study population at post-test examination

All the patients ($n = 36$) were invited to the post-test examination according to the intention-to-treat principle, but 7 patients in the treatment group (37%) and 7 patients in the control group (41%) dropped out due to time restrictions, concomitant disorders, travel abroad or unknown reasons. Thus, 12 patients in the treatment group and 10 patients in the control group participated in the post-test examination. The drop-out groups were compared with the treatment group and the control group, and no significant differences were found for age, pain duration, tender points, working hours, sick-leave or disability pension between the groups.

Adherence. Seven patients cancelled the treatment before the programme started ($n = 2$), or after 1 or 2 sessions ($n = 5$). The reasons were time restrictions (3), surgery (1), feeling depressed (1), muscle inflammation (1) and high pain intensity (1). Seven patients (58%) participated in at least 50% of the treatment sessions.

Body Awareness Rating Scale. The means and standard deviations of the pre- and post-test total score of the BARS are presented in Table I. The inter-group analysis revealed that the BARS significantly improved in the treatment group compared with the control group ($p = 0.025$). The intra-group analysis revealed a significant improvement in the treatment group ($p = 0.004$), while no changes were found in the control group ($p = 0.26$).

Fibromyalgia Impact Questionnaire. The means and standard deviations of the pre- and post-test total score of the FIQ are presented in Table I. The inter-group analysis did not reveal any significant differences between the 2 groups. The intra-group analysis of the treatment group revealed a significant negative change in the FIQ subscales of fatigue ($p = 0.03$) and depression ($p = 0.04$). The inter-group analysis of the control group revealed a significant negative change in the total score of the FIQ ($p = 0.04$), the subscales of pain ($p = 0.02$), anxiety ($p = 0.03$) and depression ($p = 0.01$).

Functional tests. The means and standard deviations of the Chair Test and Hand Grip Test are presented in Table I. No significant changes were found for these tests in the inter- and intra-group analyses.

Interviews. Eleven of the 12 patients in the treatment group participating at the post-test had attended in the treatment sessions and were interviewed. Positive experiences were reported by 8 patients, mainly in terms of improvements in balance or posture ($n = 4$) or relaxation ($n = 4$). Qigong movements were, however, perceived as demanding by 8 participants, and they reported increased pain in their low back and the hips while standing still ($n = 6$), and/or difficulty concentrating on the movements ($n = 5$). Five patients reported that their overall health had deteriorated during the study period due to environmental factors. The deterioration was associated with an increase of working hours ($n = 2$), and seasonal fluctuations in pain ($n = 3$)

Table I. *Mean values of the Body Awareness Rating Scale (BARS), the Fibromyalgia Impact Questionnaire (FIQ) and the functional test. Standard deviations are given in parentheses. The p-values for intra-group and inter-group differences are presented*

	Treatment group			Control group			Inter-group
	Pre-test ($n = 19$)	Post-test ($n = 12$)	p	Pre-test ($n = 17$)	Post-test ($n = 10$)	p	p
BARS, total score	3.0 (0.6)	3.6 (0.6)	0.01	3.2 (0.6)	3.4 (0.6)	n.s.	0.03
FIQ, total score	6.0 (1.8)	7.3 (0.9)	n.s.	6.5 (1.9)	7.1 (1.7)	0.04	n.s.
Chair Test	23 (6.6)	22 (6.3)	n.s.	22 (5.3)	23 (5.9)	n.s.	n.s.
Hand Grip, right	151 (60.4)	147 (78.6)	n.s.	154 (73.9)	146 (64.5)	n.s.	n.s.
Hand Grip, left	145 (67.8)	152 (98.1)	n.s.	135 (72.6)	142 (68.5)	n.s.	n.s.

as the programme started in the autumn and continued a period during the winter. When asked, none of the patients had regularly performed home exercises.

DISCUSSION

This study indicated that movement harmony improved during the 3-month treatment programme of body awareness therapy combined with qigong in patients with FM. However, the severity of symptoms and muscle function did not improve with the treatment. Improvement in movement harmony supports the results of previous studies of body awareness treatment (4, 9). Reasons for deterioration of the symptoms are not known, but environmental factors, reported by some of the patients interviewed, might have contributed to a general worsening of health in both groups. Also increased pain while performing qigong, may have contributed to the negative outcomes in the treatment group, since previous studies have found that pain may increase during prolonged standing (10) and after isometric exercise (11) in patients with FM. However, a recently published study evaluating the efficacy of qigong combined with meditation found improvement in the total score of the FIQ after the treatment period (12). The patients in that study had had their diagnosis approximately 5 years, while the symptom duration of the patients in the present study was 10 years. Thus, the discrepancies in the obtained results may be due to differences in the treatment programmes or in the characteristics of the subjects evaluated.

The results of this pilot study must be interpreted with care due to the small number of subjects and the high drop-out rate. Time restrictions and co-morbidities were the most common reasons for cancelling the appointment. Stricter inclusion criteria, including an assessment of the patient's baseline health status and motivation, might have reduced the number of drop-outs.

To conclude, body awareness therapy combined with qigong resulted in improved movement harmony, but no improvements were found for the symptoms or muscle function. The qigong programme including lengthy standing does not appear to be generally recommendable for patients with FM with long symptom duration due to the reported adverse effects. Qigong movements performed while changing position might be more feasible for this population, and should be evaluated in future studies.

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