



Physiotherapy approaches applied to patients with fibromyalgia: systematic review of clinical trials

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ABSTRACT

Background: Due to the complexity of the fibromyalgic patient's condition, therapeutic resources are being recruited to manage the signs and symptoms of patients with this disorder. However, the range of options offered hinders the decision-making of therapists, since the approaches are often heterogeneous. **Objectives:** The objective was to characterize publications on the effects of physical therapy in patients with fibromyalgia and to investigate the main effects of these therapies. **Methods:** A search was performed between November 2017 and March 2018 by articles published in the databases PEDro, PUBMED and SciELO from the combination of the descriptors "Fibromyalgia" and "Physical Therapy Modalities". We included clinical trials involving subjects with fibromyalgia and that approached some physiotherapeutic technique in at least one of the intervention groups. **Results:** A total of 861 studies were identified. Of these, 28 met the eligibility criteria. In addition, 02 studies were included from secondary sources. There was a predominance of studies published in the last nine years, in which the evaluation instruments of the type questionnaires, inventories and scales were used mainly. In addition, it was possible to observe an improvement in outcomes such as pain, quality of life, sleep, general health, functional capacity, balance, anxiety and depression in patients with Fibromyalgia submitted to techniques such as kinesiotherapy, hydrotherapy, electrothermo-therapy, bandages, among others. **Conclusions:** The evidences found support the use of physiotherapy as a therapeutic resource for patients with Fibromyalgia, since the techniques studied were beneficial in almost all cases. Record PROSPERO: CRD42018087432.

Keywords: Fibromyalgia; Therapy; Physiotherapy techniques.

INTRODUCTION

Fibromyalgia (FM) is described as a musculoskeletal syndrome, with a chronic character and partially clarified etiopathogenesis. It is characterized primarily by the amplification of the pain sensation, which diffuses throughout the body^(1,2). The term that is currently used was first suggested in 1976 by Hench and later recognized after the publication of the study by Yunus et al.⁽³⁾, who proposed a new model for the pathogenesis of the disease, as well as identified and described its clinical pattern⁽⁴⁾.

The prevalence of the syndrome worldwide varies between 0.2 and 6.6%, a number that is higher than those observed in 2006, which varied between 0.7 and 4.4%, mainly in women in the 35- 44 years⁽⁵⁻⁷⁾.

Although it is a common rheumatic disease in the population, its diagnosis has been a challenge for professionals due to the absence of objective anatomical and / or laboratory markers. In order to reduce subjectivity and increase diagnostic accuracy,

the American College of Rheumatology (ACR) published in 1990 the classification criteria currently accepted⁽⁸⁾.

In general, the diagnosis is directed through a clinical evaluation that should analyze the presence of signs and symptoms such as muscle spasms, muscle weakness, morning stiffness, anxiety and the presence of at least 11 of the 18 tender points scattered around the body. In addition, FM is closely related to changes in sleep, fatigue, weight loss, headache and depression⁽⁸⁻¹⁰⁾.

Given its complexity, new therapeutic modalities are being requested for the management of the disease. As an example, Physiotherapy arises with specific techniques that are proposed to intervene in the symptomatology of the disease, and can have effects on the quality of life of the subjects⁽¹¹⁾. However, the availability of a large set of therapeutic proposals may interfere with the professional decision making process, at the same time it raises doubts

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about the possibility of bringing together the results of these interventions, which are often heterogeneous in relation to duration, goals, configuration, format, therapeutic and professional components involved^(12,13).

Although the considerable number of studies evaluating different physiotherapeutic treatments for FM, it is necessary to update these studies in order to identify possible alterations in the findings reported in the literature or to modify the quality of the published evidence, thus guaranteeing a better reliability of the results. Thus, the objective of this systematic review is to characterize the studies that evaluated the effects of physical therapy in patients with FM and to investigate the most significant results of these approaches.

REVIEW

Methodological aspects

The present study is a systematic review of the literature published in PROSPERO under protocol CRD42018087432, based on clinical trials published in the databases Physiotherapy Evidence Database (PEDro), United States National Library of Medicine (PUBMED) and Scientific Electronic Library Online (SciELO). The search was conducted between November 2017 and March 2018, from the free combination of the DeCS “Fibromyalgia” and “Physical Therapy Modalities”.

The following inclusion criteria were established for the purpose of the search: a clinical trial, a sample composed of subjects diagnosed with FM and who approached a physiotherapeutic technique in at least one of the intervention groups. We excluded studies that did not address physiotherapeutic techniques.

The search and selection of studies was performed by two independent researchers. After the duplicates were excluded, both researchers proceeded to read the titles and summaries of the studies identified in the databases, and all those that fulfilled the inclusion criteria were obtained in their entirety. In the presence of disagreement a third researcher was consulted to reach a consensus on the inclusion or exclusion of the study (Figure 1). With the integrated data, the results were interpreted and arranged in a descriptive way and in tables with the intention of enabling the applicability of the final product of this review (Table 1).

Main results and discussion

The search strategy resulted in a total of 861 documents identified (PUBMED = 817, SciELO = 20 and PEDro = 24). After applying the inclusion criteria and a detailed analysis, 28 articles fit the criteria of the research eligibility. Two studies were included from other sources. During the first filtering, the main reason for exclusion was due to the methodological design. One study⁽¹³⁾ was excluded from one database because of indexation duplicity. After reading in full, two studies were excluded^(14,15) because they did not address any

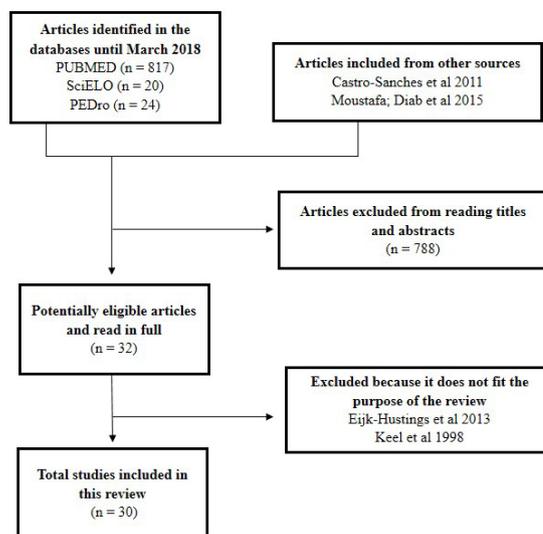


Figure 1. Flowchart of the search and selection of the studies.

physiotherapeutic technique. Figure 1 shows the flowchart of the study selection.

As regards the characterization of included studies, it can be observed that 75% (n = 21) were published in the last 9 years (2008-2017), 21.4% (n = 6) between 2006 and 2001 and 1 in the 1992, corresponding to 3.6% of the total sample. In addition, there were predominant publications in English (75%), followed by Portuguese (21.4%) and Spanish (3.6%).

The studies included a total of 1,629 subjects with fibromyalgia, mostly women aged 40 years or older, divided into intervention and control groups, ranging from 10 to 175 volunteers in each study.

Regarding the outcomes, pain was the variable most analyzed by the researchers, being present in 82.1% of the publications. In addition, it was frequent to include results related to quality of life (42.8%), anxiety, depression, and mood (35.7%), sleep and fatigue (42.8%), general health status (25%), morning flexibility and stiffness (21.4%), and balance and muscle strength were among the least investigated (11.2%) Other results such as: patient satisfaction, number of medications ingested per day, frequency of physical activity and heart rate variability were also studied.

As evaluation instruments, the great use of questionnaires, scales and / or inventories was highlighted. From the total of studies, 85.7% used some such tool to measure the outcomes. In general, the Fibromyalgia Impact Questionnaire (FIQ), Visual Analogue Scale (VAS), SF-36 quality of life questionnaire and the Beck Depression Inventory were the most used.

Finally, regarding physiotherapeutic interventions, kinesiotherapy (relaxation, stretching, strengthening and aerobic exercises) stood out as the most used approach in the studies, being present in at least one intervention group in 71.4% of the studies. Also noteworthy is the extensive investigation of hydrotherapy (28.5%) and electrothermotrophotometric

**Table 1.** Summary guide of studies included in this review.

Study	Sample	Groups	Outcomes analyzed	Evaluation instruments	Results
CASTRO SANCHEZ et al. (2017)	64	Dry needle vs. Cross ribbon	Myofascial triggers, spine mobility	Algometer, VAS, Spinal Mouse	Dry needles: ↓ pain in mm. thoracic and lumbar. Dry needles and cross-tape: similar effect on spinal mobility
COPPIETERS et al. (2016)	59	Relaxation vs. cognitive stress	Pain	VAS	A simple relaxation session as well as cognitive stress has a negative acute effect on pain modulation
LARSON et al. (2015)	130	Relaxation vs. resistance	Strength, impact of FM, pain, quality of life, functional capacity, level of fear and avoidance, overall impression	Isokinetic dynamometer, FIQ, VAS, SF-36, WT6, CPAQ, FABQ, PGIC, disability related to pain	Progressive resistance exercise centered in person is viable, ↑ muscular strength, state of health, ↓ pain
GAVI et al. (2014)	80	Strengthening vs. Flexibility	Physical fitness, pain, function, quality of life, mood, heart rate	Dynamometer, tests: treadmill, MRT1, sit and reach, VAS, SF-36, FIQ, IDATE, electrocardiogram	Strengthening is better than flexibility exercises for ↓ pain ↑ force. Stretching improved anxiety. Both improved the quality of life
SAÑUDO et al. (2013)	46	WBV vs. exercises vs. usual medical care	Balance, strength of lower limbs	Biodex F1c, T-FORCE	Exercises and body vibration throughout the body ↑ balance
CARBONARIO et al. (2013)	28	Education + exercises + TENS vs. education + exercises	Pain, impact of FM	VAS, painmeter, FIQ	Education + exercises + TENS: ↓ pain, anxiety, fatigue, stiffness, ↑ ability to work
LÓPEZ-RODRÍGUEZ et al. (2012)	70	Stretching vs. biodance in aquatic environment	Pain, impact of FM and depression	Questionnaires McGill-Melzack, painmeter, VAS, FIQ, Beck Inventory	Aquatic biodance: ↓ pain, ↑ quality of life
SAÑUDO et al. (2011)	42	Aerobic + strength + flexibility vs. usual care	Impact of FM, depression, quality of life, pain	FIQ, Inventory of depression, SF-36, VSA	Strengthening + flexibility + aerobic: ↑ state of psychological health and quality of life
MANNERKORPI et al. (2010)	67	Nordic walking vs. low intensity walking	Functional capacity, impact of FM, cardiovascular function, exertion, fatigue, physical activity, anxiety, depression, muscular sensitivity	TC6', FIQ, cycle ergometer, Borg, telemetry, MFI, LTPAI, HADS, algometer	Nordic walking is feasible, ↑ functional capacity, ↓ physical limitations
GUSI et al. (2010)	41	WVB vs. control	Balance	Biodex	Vibration ↑ dynamic balance
TARGINO et al. (2010)	58	Acupuncture + standard care vs. standard care	Pain, myofascial trigger points, quality of life	VAS, algometer, SF-36	Acupuncture ↓ pain, ↑ quality of life
FREGNI et al. (2006)	32	simulated tDCS vs. tDCS active primary motor cortex vs. tDCS active left DLPFC	Pain, FM impact, quality of life, overall impression, depression, cognition	VAS, FIQ, SF-36, CGI, PGA, Beck Depression Inventory, MMSE	tDCS ↓ pain and improves muscle strength
CEDRASCHI et al. (2004)	164	Self-management vs. health education	Impact of FM, quality of life, pain, satisfaction	FIQ, PGWB, SF-36, RPS, scale of Likert	Self-management + health education ↑ quality of life and satisfaction

Note: VAS: Visual Analogic Scale; FIQ: Fibromyalgia Impact Questionnaire; SF-36: Short Form Health Survey; WT6: 6-minute Walk Test; CPAQ: Chronic Pain Acceptance Questionnaire; FABQ: Fear Avoidance Beliefs Questionnaire; PGIC: Patient Global Impression of Change; MRT1: 1 maximum repetition test; IDATE – Inventário de Ansiedade Traço-Estado; WBV: Whole Body Vibration; TENS: Transcutaneous Electrical Nerve Stimulation; FM: Fibromyalgia; MFI – Multidimensional Fatigue Inventory; LTPAI: Leisure Time Physical Activity Instrument; HADS: Hospital Anxiety and Depression Scale; CGI: Clinical Global Impression; PGA: Patient Global Assessment; MMSE: Mini Mental State Examination; PGWB: Psychological General Well-Being; RPS: Regional Pain Score; NHP: Nottingham Health Profile; MOS: Medical Outcome Study.



Table 1. Continued...

Study	Sample	Groups	Outcomes analyzed	Evaluation instruments	Results
HAKKINEN et al. (2001)	21	Strength vs. no training vs. healthy with training	Strength, electromyographic activity, pain, sleep, fatigue, functional capacity	Dynamometer, Electromyography, Stanford Health Assessment Questionnaire, Beck Depression Index	Progressive strength training is safe and ↓ impact of the syndrome on the neuromuscular system, perceived symptoms and ↑ functional capacity
DELUZE et al. (1992)	70	Active electroacupuncture vs placebo	Pain, number of analgesics, sleep, morning stiffness, general condition	Manometer, number of tablets used, VAS, sleep inventory	Electroacupuncture improved all symptoms of FM
MORETTI et al. (2016)	15	Pompage + stretching + aerobic vs. stretching + exercise	Pain, fatigue, sleep	Questionnaires: McGill, Chalder's Fatigue, Sleep Inventory	Pompage + aerobic exercises + stretching did not show important beneficial effects
SILVA et al. (2008)	10	Hydrotherapy vs. TENS	Flexibility, pain, quality of life, depression	Third finger-soil index, VAS, SF-36, NHP, Beck inventory	Hydrotherapy and TENS: ↑ physical conditioning. TENS: more effective in the treatment of FM
TAKIGUCHI et al. (2008)	20	Acupuncture vs. insertion of needles in tender points	Pain, sleep and quality of life	VAS, inventory of sleep, FIQ	Acupuncture improved pain, sleep and quality of life
SANTANA et al. (2010)	10	Ai Chi vs. No intervention	Pain and quality of life	FIQ and Sensitive Points Index Scale	Ai Chi improved pain, but was unable to improve the quality of life
HECKER et al. (2011)	25	Hydrokinesotherapy x Kinesiotherapy	Quality of life	SF-36	Both groups improved in most SF-36 domains
MATSUTANI et al. (2012)	32	Stretching x Aerobic Exercises	Pain, number of tender points, sleep, anxiety and depression	VAS, painmeter, <i>Post Sleep Inventory</i> , Anxiety Inventory and Beck Depression Scale	It is suggested that stretching be more beneficial in pain in the number of tender points, in sleep and depression. Aerobic exercise produced more important effects on anxiety
VITORINO et al. (2006)	50	Hydrotherapy vs. Conventional physiotherapy	Quality of life and total sleep time	SF-36 and sleep diary	The hydrotherapy group increased in 1 hour sleep time. There was also improvement in the SF-36 domains but no statistical significance
VAYVAY et al. (2016)	45	Laser vs. Laser placebo vs. <i>Tapping</i>	Pain, trunk flexibility, functional status, general health and anxiety	VAS, clinical tests for flexibility, FIQ, SF-36, Beck Inventory	The laser group improved pain, general health, anxiety and quality of life. There was an increase in the flexibility of the trunk of the tapping group. There was a significant improvement in the three groups for functional status and pain
VALENCIA et al. (2009)	15	Kinesio-teaping + active muscle training vs. Mièzierès Method	Flexibility, pain and impact of disease	Clinical tests, palpation of pain points and FIQ	Both groups showed reduced disease severity and improved flexibility. However, there was no difference between baseline and follow-up values of 24 weeks

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Table 1. Continued...

Study	Sample	Groups	Outcomes analyzed	Evaluation instruments	Results
ALMEIDA et al. (2003)	17	Pulsed ultrasound + interferential current vs. Pulsed ultrasound + inactive interference current	Pain and sleep	Modified map of the body of Wisconsin and VAS, Fischer's painmeter and palpation of the 18 painful points, in addition to the Brazilian Inventory of Sleep Disorders and polysomnography	Improvement in both pain and sleep was observed in the active intervention group. However, no improvement was observed in the placebo group
CALANDRE et al. (2009)	81	Stretching vs. Ai Chi, both in the pool	Symptomatology of FM and sleep	FIQ, Pittsburgh Sleep Quality Index, Beck Depression Inventory, State and Trait Anxiety Inventory e o SF-12	Although no differences were found between groups, Ai Chi significantly improved the symptoms of fibromyalgia and sleep quality, while stretching only improved anxiety and depression
GONZÁLEZ-VIEJO et al. (2005)	70	Sertraline vs. Ultrasound + physiotherapy	Pain, morning stiffness and sleep	VAS and questionnaire MOS	Pain, sleep, and morning stiffness were significantly improved in the sertraline therapy group
JOSHI et al. (2009)	175	Amitriptyline vs. physiotherapy (physical training and aerobic session)	disability	FIQ	Amitriptyline therapy or physical therapy is equally effective in improving the functional capacity of individuals with FM
CASTRO-SANCHES et al. (2011)	86	Myofascial release vs. simulated electrotherapy	Pain, postural stability and physical function, disease severity and number of tender points	Pressure algometer, McGill questionnaire, balance platform, FIQ, Likert scale for impression of disease severity	Myofascial release techniques may be a complementary therapy for symptoms of pain, physical function and clinical severity, but do not improve postural stability in patients with fibromyalgia syndrome.
MOUSTAFA; DIAB, 2015	120	Multimodal program vs. Multimodal program + cervical manipulation	Pain, disease impact, sleep, anxiety, depression and posture	FIQ, Pain Catastrophe Scale, Pittsburgh Sleep Quality Index, Beck Inventory	The experimental group achieved significant improvement in posture, QIF scores, pain, sleep, depression and enasy

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resources (14.2%). (10.7%), exercises in the WBV platform (7.1%), dry needling (3.5), acupuncture (7.1%), pommage (3.5%), myofascial release (%) and cervical manipulation (3.5%) were also investigated by the studies. It is possible to perceive that the sum of evaluated outcomes and of the physiotherapeutic interventions were superior to 100%. This is due to the fact that all the studies analyzed two or more techniques and / or outcomes.

To facilitate the visualization of the studies included in this review, a table was created with more detailed information about each one (Table 1).

The present study aimed to evaluate the evidence that touches on the efficacy of physiotherapeutic approaches in patients with FM. Thus, from the meeting and critical

evaluation of the clinical trials, a more effective and conscious therapeutic practice becomes possible.

In general, the treatment of this disease involves multiprofessional approaches that act in physical, pharmacological, psychological and behavioral scope⁽¹⁶⁾. More specifically, in the physical domain, it is important to emphasize the role of physiotherapy, which stands out for having a series of specific techniques that aim to control pain, improve symptomatology and maintain functional abilities⁽¹⁷⁾. As an example of these techniques is kinesiotherapy, which corresponds to a set of exercises that include stretching, strengthening and aerobic training.

Gavi et al.⁽¹⁸⁾ and Matsutani et al.⁽¹⁹⁾, showed that global stretching was more effective than aerobic and moderate



intensity strength training in improving quality of life and sleep, as well as reducing pain symptomatology, tending numbers points and depression index. However, the studies by Moretti et al.⁽²⁰⁾ and Sañudo et al.⁽²¹⁾ indicate that the association of these techniques (stretching + aerobic or stretching + strength training) is more effective than pompage or usual medical care in improving the quality of sleep, pain and fatigue, general health status and functional capacity of patients with FM.

Regarding strengthening exercises, Hakkinen et al.⁽²²⁾ and Larsson et al.⁽²³⁾ compared women undergoing strength training with others who received relaxation or who did not undergo any intervention, and observed that in the first group there was a significant increase in strength, reduction of pain and fatigue, improvement in electromyographic activity, depression and general health status. In addition, the results of Joshi et al.⁽²⁴⁾ showed that the strengthening applied in a way associated with aerobic exercises has a similar effect to the use of amitriptyline and may increase the functional capacity of patients with FM.

Regarding relaxation, Cedraschi et al.⁽²⁵⁾ observed that individuals who received this type of intervention associated with pool exercises or other solo activities, such as aerobic training, had an improvement in quality of life and physical function in the long and increased satisfaction with treatment. However, a study by Coppieters et al.⁽²⁶⁾ showed that a single relaxation session applied alone increased the temporal summation and reduced the conditioned modulation of pain in individuals with FM. Additionally, Larsson et al.⁽²³⁾ observed that the relaxation exercise is less effective than the training of resisted exercises in the improvement of FM symptomatology.

Regarding the investigation of aerobic exercises, based on our review, there was a shortage of studies evaluating it in an isolated group in an intervention group. However, when evaluated in a way associated with other therapeutic modalities, it was possible to perceive some type of improvement of these patients. Moretti et al.⁽²⁰⁾, for example, assessed the association of stretching and aerobic exercise, observed improvement in pain, fatigue and sleep quality. But when analyzing these two techniques separately, Matsutani et al.⁽¹⁹⁾ inferred that the only clinical gain in which the aerobic overlapped the elongation was in relation to the level of anxiety.

Another widely used method in the treatment of FM is hydrotherapy or aquatic physiotherapy, which consists in the performance of therapeutic exercises in a heated swimming pool⁽²⁷⁾. Vitorino et al.⁽²⁸⁾ demonstrated that the method was equally effective when compared to conventional physiotherapy in terms of improvement in quality of life and sleep.

According to Hecker et al.⁽²⁷⁾, hydrokinesitherapy and kinesiotherapy showed a significant improvement in most of the aspects addressed by the SF-36 questionnaire. Thus, it is suggested by the authors that aquatic kinesiotherapy promotes a muscular relaxation favorable for the improvement

of the quality of life. However, it is not the main factor to reduce the symptomatology, since the technique in soil also provided beneficial effects for the promotion of the well-being of these individuals.

In addition, data from the study by Calandre et al.⁽²⁹⁾ point to the existence of improvement in quality of life and anxiety level in patients submitted to the Ai Chi method (active relaxation method in the aquatic environment) or to stretching, without significant difference between the interventions. However, the study by Santana et al.⁽¹⁴⁾ shows that the Ai Chi method improved pain, but did not present significant results on quality of life. However, when compared to health education, Mannerkorpi et al.⁽³⁰⁾ observed that hydrotherapy presented better results in reducing pain and FIQ scores and increased physical fitness. In addition, it could be seen from the study by Silva et al.⁽³¹⁾ that hydrotherapy was shown to be less effective than Transcutaneous Electrical Nerve Stimulation (TENS) analgesia in improving pain and both interventions were equally beneficial in quality of life.

It is also important to emphasize the practical use of electric, thermal and phototherapy resources in the therapeutic management of people with FM. Transcutaneous Electrical Nerve Stimulation, according to the findings of Carbonario et al.⁽³²⁾, presented reduction of pain, fatigue, morning stiffness, anxiety and depression and improvement in work performance. Regarding Transcranial Direct Current Stimulation, Fregni et al.⁽³³⁾ observed a reduction in pain and improvement in quality of life in patients with FM.

Regarding ultrasound, the study by Almeida et al.⁽³⁴⁾ that evaluated the combination of this feature with interferential current showed improvement of pain in this group compared to the sham group. However, the efficacy of the combination of sleep therapy with conventional physiotherapy was lower when compared to the use of sertraline in pain, morning stiffness and sleep quality, according to the results presented by Gonzalez-Viejo et al.⁽³⁵⁾.

Vayvay et al.⁽³⁶⁾, in turn, conducted a clinical trial that used another feature, laser therapy, compared to kinesio taping and found that there was a significant improvement in pain severity during activities, anxiety level and general health by application of the laser, while in the taping group there was an increase in trunk flexibility. In the post-intervention, it was also possible to observe that in both groups pain reduction during the night and improvement of functional status occurred. Therefore, the authors suggested that both kinesio and laser applications generate a similar effect on the parameters in patients with FM, so the first method could be preferred instead of laser application to a rehabilitation program.

Although it was still a question of bandages, it was possible to observe that needle application improved pain measurements and, with respect to the mobility of the spine, the two interventions induced similar results. Another method involving the use of needles, acupuncture, proved to be



effective, according to the study Targino et al.⁽³⁸⁾ in improving pain and quality of life; besides the reduction in the number of analgesic medications, sleep quality, morning stiffness and general health status, as seen by Deluse et al.⁽³⁹⁾. Targino et al.⁽³⁸⁾ also observed that the effects of acupuncture may be higher than that of antidepressants in the long term.

Regarding the techniques of manual therapy, the results of Moretti et al.⁽²⁰⁾ suggest that pompage as complementary therapy to aerobic and stretching exercises does not present important beneficial effects for women with fibromyalgia, since the other techniques cited induced similar improvements or higher in the pain of these patients. The study by Castro-Sanches et al.⁽⁴⁰⁾ concluded that myofascial release may be a useful complementary therapy to improve pain, physical function and severity. However, the technique was not able to interfere in the postural stability of FM patients. In addition, Moustafa and Diab⁽⁴¹⁾ suggest that the addition of cervical manipulation in subjects with FM and cervical dysfunction may improve posture, pain, sleep, anxiety, depression, and disease impact.

Finally, Whole Body Vibration (WBV) or Whole Body Vibration platform exercises, according to the findings of Sañudo et al.⁽⁴²⁾ and Gusi et al.⁽⁴³⁾, showed to be effective in improving the balance in women with FM, increasing by up to 36%.

It is possible to identify that the included trials evaluated a variety of physiotherapeutic approaches aimed at the treatment of FM patients, with pain and quality of life being the outcomes most studied by the researchers. Also noteworthy is the wide use of questionnaires and scales for the evaluation of these individuals. It is important to emphasize the heterogeneity of the techniques regarding the intensity, duration and forms of application, and this must be carefully analyzed by the professional in the clinical scope.

Therefore, the results of the present review, with a focus on the techniques and their effects, allowed the compilation of evidence and provided a subsidy for the decision-making of physiotherapists in the elaboration of treatment protocols more effective and scientifically based.

CONCLUSION

Evidence supports the use of physiotherapy in the treatment of patients with FM, since in all studies the applied techniques showed some benefit in relation to the signs and symptoms of the disease, with the exception of progressive relaxation and pompage that did not show beneficial effects in these patients. It is suggested, therefore, that the physiotherapeutic techniques are quite effective in treating the symptomatology and the physical and functional consequences of the individual with FM.

AUTHORS' CONTRIBUTIONS

YTP- writing the manuscript; MCS and TABA- search and selection of studies; RSS- translation and final revision of the text; CAAL- elaboration of the work protocol and final revision of the text.

CONFLICT OF INTEREST

nothing to declare.

AUTHORS DETAILS

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