



Evaluation of the Treatment of Patients with Fibromyalgia at the Clinical School of Physiotherapy of the University of Gurupi

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/JAMMR/2023/v35i175098

Open Peer Review History:

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://www.sdiarticle5.com/review-history/100799>

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ABSTRACT

Introduction: Fibromyalgia is a syndrome characterized by chronic local or general musculoskeletal pain, but rare. May present with muscle stiffness, joint stiffness, insomnia, fatigue, mood swings, cognitive disorders, anxiety, depression, general sensitivity, and inability to perform activities of daily living. The present research aimed to evaluate the effectiveness of the treatments of patients with fibromyalgia of the Clinical School of Physical Therapy of the University of Gurupi.

Materials and Methods: The methodology used for the analysis of the collected data was the statistical approach (described presentation of the results by means of measures of central tendency, based on percentages, statistical tests of comparisons of means and correlation).

Results: We found 400 materials conducive to the subject addressed, but only 234 patients were fitted to the proposed inclusion criteria.

Conclusion: It is relevant by proving, through the tables, the effectiveness of the techniques used in relation to the improvement of pain and quality of life of these patients.

Keywords: Fibromyalgia; physiotherapy; chronic pain; musculoskeletal pain.

1. INTRODUCTION

Fibromyalgia (FM) is a syndrome characterized by chronic local or general musculoskeletal pain. May present with muscle stiffness, joint stiffness, insomnia, fatigue, mood swings, cognitive disorders, general sensitivity, and inability to perform activities of daily living [1].

According to the Brazilian Society of Rheumatology (BSR, 2022), the group of people who are most affected by this syndrome, for the most part, are women between 30 and 55 years old, but there are cases in older people and also in children and adolescents and has its diagnosis essentially clinical [2].

Chronic pain is defined as pain that persists for a period of three months or more and is considered a public health problem [3].

Recent studies have suggested an implicit genetic susceptibility in which it triggers some of the symptoms [4]. Despite the myalgias that these patients feel, no abnormality in the muscle was found in a valid way [5].

The consequences of fibromyalgia are reduced quality of life, increased use of health resources and loss of productivity at work and so that these symptoms can be attenuated, it is necessary to train with exercises [6].

According to Carville et al [7], although there are studies that show benefits for various exercise modalities, there is evidence that the practice of aerobic exercises both in the aquatic

environment and on the ground is considered forms of treatment and demonstrate satisfactory results in patients with fibromyalgia.

The pathophysiological factors of fibromyalgia are not yet well known. It seems to be related to a problem in the processing of pain in the brain, in most cases, these patients are hypersensitive to pain that may be associated with psychological problems [8].

Mease [9], says that the treatment of fibromyalgia is done by a group of clinical professionals who work together in favor of the diagnosis, treatment and recovery of the patient based on education, pharmacological treatment (tricyclic antidepressants and selective serotonin reuptake inhibitors), physical exercise and cognitive-behavioral therapy. In general, pharmacological treatment is insufficient if treated individually.

According to Portuguez & Gallardo [10]; Sagy, et al. [11], to reduce symptoms and favor a better quality of life in the long term, drugs act together with physiotherapy in improving and controlling pain and increasing quality of life.

Therefore, the present study aimed to evaluate the effectiveness of the treatment of patients with fibromyalgia at the Clinical School of Physiotherapy of the University of Gurupi.

2. MATERIALS AND METHODS

The present research was carried out through a survey of data collected in files of the Clinical

School of Physicaltherapy of the University of Gurupi (CSP), in patients who were treated in the areas of hydrotherapy, posture and pilates in the period between 2019/1 to 2022/2, being greater than or equal to 30 years. To quantify the profile of the patients, the following variables were used: year in which the form was made, age, frequency of treatment 2 times a week, therapeutic resources performed, visual analogue scale of pain and quality of life questionnaire used as inclusion criteria. In view of the estimate of 400 patients diagnosed with fibromyalgia treated at the CSP, the sample size calculation with confidence level is 95% and error of 5% accounted for 234 medical records.

The present study was submitted for approval by the Research Ethics Committee, in accordance with the resolution of the National Health Council (NHC 466/2012, as it is a research involving

human beings and which, directly or indirectly, involves individuals in whole or in part, including managing information and materials.

3. RESULTS AND DISCUSSION

After the analysis of the records of the patients who were treated in the areas of pilates, posture, hydrotherapy, electrotherapy and myofascial release mentioned above, 400 materials were found conducive to the subject addressed, but only 234 patients were fitted to the proposed inclusion criteria. 60 patients underwent hydrotherapy, 55 patients underwent posture care, 49 patients underwent Pilates care, 36 patients underwent electrotherapy and 34 patients underwent myofascial release. The results found during data collection are listed in Table 1 (year 2019), Table 2 (year 2020), Table 3 (year 2021) and Table 4 (year 2022):

Table 1. Collection of data in 2019

Every year of (2019)	Pilates	Posture	Hydrotherapy	Electrotherapy	Myofascial release
Sample	13 patients, aged between 30 and 45 years who underwent intermediate Pilates.	15 patients, aged between 32 and 64 years.	20 patients, aged between 48 and 67 years.	10 patients, aged between 33 and 65 years.	6 patients, aged between 34 and 58 years.
Physiotherapeutic Resources	Stretching exercises, strengthening and gaining body awareness.	Global postural reeducation	Exercises to increase muscle strength and improve cardiorespiratory fitness.	Transcutaneous electrical neurostimulation associated with therapeutic ultrasound.	Release of the muscle with acute pain.
Parameters	2 times a week, duration of 50 minutes, totaling 80 sessions.	2 times a week, duration of 45 minutes, totaling 100 sessions.	2 times a week, duration of 40 minutes, totaling 110 sessions.	2 times a week, duration of 40 minutes per service, totaling 3 weeks.	2 times a week, totaling 10 sessions.
Main Results	There was an improvement in flexibility and gain in muscle strength Initial VAS: 6 Final VAS: 1 Initial QIFR-Br: 32.83 QIFR-Br Final: 72	There was a gain in body biomechanics and postural balance. Initial VAS: 8 Final VAS: 2 Initial QIFR-Br: 45.67 QIFR-Br Final: 80	There was a reduction in joint overload and muscle relaxation. Initial VAS: 7 Final VAS: 0 Initial QIFR-Br: 20.97 QIFR-Br Final: 89	Reduction of pain and increased mobility. Initial VAS: 10 Final VAS: 2 Initial QIFR-Br: 34.78 QIFR-Br Final: 98	Decreased overload and muscle tension VAS Start: 8 VAS Final: 1 Initial QIFR-Br: 65.54 QIFR-Br Final: 100

*VAS: Visual Analogue Scale of Pain
*QIFR-Br: Revised Fibromyalgia Impact Questionnaire

Table 2. Collection of data in 2020

Every year of (2020)	Pilates	Posture	Hydrotherapy	Electrotherapy	Myofascial release
Sample	10 patients, aged between 32 and 49 years who underwent advanced pilates.	15 patients, aged between 39 and 54 years.	10 patients, aged between 42 and 67 years.	11 patients, aged between 40 and 58 years.	8 patients, aged between 40 and 65 years.
Physiotherapeutic Resources	Stretching, fluidity, centering and breathing exercise.	Global postural reeducation.	muscle strengthening and relaxation exercises.	Myofascial release associated with ultrasound.	Relax the muscles
Parameters	2 times a week, duration of 50 minutes, totaling 90 sessions.	2 times a week, duration of 40 minutes, totaling 100 sessions.	2 times a week, duration of 45 minutes, totaling 115 sessions.	2 times a week, duration of 50 minutes, totaling 30 sessions.	2 times a week, duration of 40 minutes, totaling 10 sessions.
Main Results	There was improvement in physical performance	Gain of respiratory mobility and improvement of the	Improved stamina, flexibility and balance.	Reduction of muscle spasms.	Increased joint mobility and body awareness.

Every year of (2020)	Pilates	Posture	Hydrotherapy	Electrotherapy	Myofascial release
	and improvement in posture. Initial VAS: 8 - VAS Final: 2 - Qifr-Br Initial: 45.78 QIFR-Br Final: 70	aesthetic and preventive aspect of poor posture. VAS Start: 9 VAS Final: 1 Initial QIFR-BR: 36.00 QIFR-Br Final: 90	VAS Start: 7 VAS Final: 2 Initial QIFR-Br: 28.89 QIFR-Br Final: 69	VAS Start: 9 VAS Final: 0 Initial QIFR-Br: 32.83 QIFR-Br Final: 72	VAS Starter:6 VAS Final: 0 Initial QIFR-Br: 44.76 QIFR-Br Final: 78

*VAS: Visual Analogue Scale of Pain
*QIFR-Br: Revised Fibromyalgia Impact Questionnaire

Table 3. Collection of data in 2021

Every year of (2021)	Pilates	Posture	Hidroterapia	Electrotherapy	Myofascial release
Sample	13 patients, aged between 30 and 45 years who underwent beginner pilates.	15 patients, aged between 50 and 69 years.	14 patients, aged between 45 and 67 years.	10 patients, aged between 33 and 69 years.	12 patients, aged between 66 and 70 years.
Resources Physiotherapists	Stretching and strengthening exercises.	Global postural reeducation.	Resistance exercises and exercises to improve blood circulation.	Myofascial release associated with TENS.	Release and activate the muscles.
Parameters	2 times a week, duration of 30 minutes, totaling 100 sessions.	2 times a week, duration of 40 minutes, totaling 110 sessions.	2 times a week, duration of 50 minutes, totaling 115 sessions.	2 times a week, duration of 30 minutes, totaling 90 sessions.	2 times a week, duration of 20 minutes, totaling 30 sessions.
Main Results	There was an increased willingness to perform day-to-day activities. Initial VAS: 10 VAS Final: 0 Initial QIFR-Br: 32.67 QIFR-Br Final: 95	Relief of pain in the spine and strengthening of body muscles. VAS Start: 7 VAS Final: 3 Initial QIFR-BR: 56.73 QIFR-Br Final: 87	There was an improvement in blood circulation VAS Start: 9 VAS Final: 1 Initial QIFR-BR: 48.97 QIFR-Br Final: 90	Reduction of edema. VAS Start: 7 VAS Final: 0 Initial QIFR-Br: 67.56 QIFR-Br Final: 95	It favored the complete execution of the movements. VAS Start: 8 VAS Final: 1 Initial QIFR-Br: 59.55 QIFR-Br Final: 81

*VAS: Visual Analogue Scale of Pain
*QIFR-Br: Revised Fibromyalgia Impact Questionnaire
*TENS: Transcutaneous Electrical Nerve Stimulation

Table 4. Collection of data in 2022

Every year of (2022)	Pilates	Posture	Hydrotherapy	Electrotherapy	Myofascial release
Sample	13 patients, aged between 30 and 45 years who underwent intermediate Pilates.	10 patients, aged between 35 and 60 years.	16 patients, aged between 38 and 62 years.	5 patients, aged between 41 and 57 years.	8 patients, aged between 53 and 66 years.
Physiotherapeutic Resources	Strengthening exercises.	Global postural reeducation.	Exercises to improve pain and isometric exercises of strength and stretching.	Myofascial release associated with laser.	Increase joint mobility and body awareness.
Parameters	2 times a week, duration of 30 minutes, totaling 115 sessions.	2 times a week, duration of 40 minutes, totaling 118 sessions.	2 times a week, duration of 50 minutes, totaling 110 sessions.	2 times a week, duration of 30 minutes, totaling 50 sessions.	2 times a week, duration of 10 minutes, totaling 10 sessions.
Main Results	There was improvement in muscle tone and balance. VAS Initial:7 VAS Final: 0 - Qifr-Br Initial: 45.56 QIFR-Br Final: 90	Correction of inadequate postures and relief of muscle tension. Initial VAS: 8 - VAS Final: 2 - Qifr-Br Initial: 37.76 QIFR-Br Final: 75	Improved quality of life. VAS Initial: 6 VAS Final: 0 - Qifr-Br Initial: 59.33 QIFR-Br Final: 98	Improvement of pain and quality of life and reduction of inflammatory processes. VAS Initial: 7 - VAS Final: 3 - QIFR-BR Initial: 48.98 QIFR-Br Final: 94	It promoted progressive changes on the physical and emotional levels. VAS Initial: 9 - VAS Final: 1 - Qifr-Br Initial: 24.59 QIFR-Br Final: 74.35

*VAS: Visual Analogue Scale of Pain
*QIFR-Br: Revised Fibromyalgia Impact Questionnaire

4. CONCLUSION

The exercise programs proposed in the patients attended at the Clinical School of Physical Therapy of the University of Gurupi-To promoted

improvement of the quality of life and the functioning of the organism as a whole, evidencing the effectiveness of the treatments through the use of physiotherapeutic resources generating a decrease in pain and that can be

considered options for prevention and treatment of the same, gain of functionality and quality of life in patients with fibromyalgia in order to understand the needs of each one.

Thus, the survey of the physiotherapeutic treatments performed at the PHC of the University of Gurupi is relevant, proving, through the tables, the effectiveness of the techniques used in relation to the improvement of pain and quality of life of these patients.

Through the applicability of the Visual Analogue Scale of pain and the revised fibromyalgia impact questionnaire, it was possible to prove improvement over the proposed treatments by observing the painful profile and the patient's response to fibromyalgia treatment with regard to pain and quality of life.

CONSENT

As per international standard or university standard, patient(s) written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

As per international standard or university standard written ethical approval has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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Peer-review history:
The peer review history for this paper can be accessed here:
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