

EVALUATION OF THE TREATMENT OF PATIENTS WITH FIBROMYALGIA AT THE CLINICAL SCHOOL OF PHYSIOTHERAPY OF THE UNIVERSITY OF GURUPI

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. **Material and Method.** This study has a quantitative and qualitative character, collecting data records of people affected by the symptoms of fatigue in the post-covid and describing the quality of life they are having with this problem. The field research, exploratory study, and a data collection was done through 2 questionnaires, CFQ-11 and EQ-5D-5L, all questions were answered based on the individual's situation before and after cure of covid-19, characterizing changes in physical and mental states after infection. **Results:** The methodology used for the analysis of the collected data was the statistical approach (described presentation of the results through measures of central tendency, based on percentages, statistical tests of comparisons of means and correlation), with the aid of the Microsoft Excel program version 2016 and the results are presented by tables for discussion. **Conclusion:** 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.

Keywords: *Fibromyalgia, Physiotherapy, Pilates method, Aquatic physiotherapy.*

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].

Comment [1]: The aim of the study should be stated in the abstract. Attention should be given to the use of capitalization of sentences and to the use of full stops and colons after the sections identifications in the abstract.

The methodology (analyses etc.) should be describe under Material and Method, not under Results.

What are the main results of this study? They should be stated under Results.

Under "Conclusion" should be the implication(s) of this study. Stating that it is relevant is not enough. Why it is relevant? Which results supports the relevance of this work?

Comment [2]: The use of these two keywords implies that these are important techniques found in your results. However, no information regarding them is presented in Abstract. Authors should revise the Abstract in add relevant information should these keyword be maintained.

Recent studies have suggested an implicit genetic susceptibility in which the family environment 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].

Comment [3]: Suggestion: revise this sentence, as genetic susceptibility is not the same thing as family environment. The first is a hereditary mechanism, the last is an environmental factor. If both are important in fibromyalgia manifestation then two statements are due.

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].

Comment [4]: Suggestion: revise this paragraph for grammar. Describe the importance of exercise in the management of symptoms.

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].

Comment [5]: Suggestion: re-allocate this paragraph after the third paragraph.

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.

Comment [6]: Suggestion: check for word misspelling.

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.

Comment [7]: The whole section should be revised and rewritten. Take into account:

The design of the study: What is described here is not a survey, it is more a cross-sectional documentary research.

Eligibility criteria: Describe all the inclusion and exclusion criteria for the inclusion and exclusion of the files.

Method: Describe the methods of collecting data, how the data were organized and assessed. Statement of confidence interval makes no sense in this type of research. State who did the data collection and evaluation.

Ethical approval statement: It is necessary and good practice to gather ethical approval to hand and collect data from human participants even when it comes from a data reservoir or registry.

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. MATERIAL AND METHODS

The present research was carried out through a survey of data collected in files of the Clinical School of Physical Therapy of the University of Gurupi (CEF), 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 CEF, the sample size calculation with confidence level is 95% and error of 5% accounted for 234 medical records.

Comment [8]: Suggestion: To separate Discussion from Results. Treat them as separate sections please.

There is no discussion so far. The author presented the data as a whole in the tables. The data are not concise.

Suggestion: Improve the presentation of the data. Show all the descriptive data (demographic, mean and standard deviations) for every relevant technique. In Discussion, describe the implications of the study and the limitations.

3. RESULTS AND DISCUSSIONS

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

Comment [9]: Same of these techniques were not mentioned before. Please, provide a concise description of the eligibility criteria so that all the targeted techniques are mentioned in Methods.

in tables 1 (year 2019), table 2 (year 2020), table 3 (year 2021) and table 4 (year 2022) below:

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	<p>There was an improvement in flexibility and gain in muscle strength</p> <p>Initial VAS: 6</p> <p>Final VAS: 1</p> <p>Initial QIFR-Br: 32.83</p> <p>QIFR-BR</p>	<p>There was a gain in body biomechanics and postural balance.</p> <p>Initial VAS: 8</p> <p>Final VAS: 2</p> <p>Initial QIFR-Br: 45.67</p> <p>QIFR-BR Final: 80</p>	<p>There was a reduction in joint overload and muscle relaxation.</p> <p>Initial VAS: 7</p> <p>Final VAS: 0</p> <p>Initial QIFR-Br: 20.97</p> <p>QIFR-BR Final: 89</p>	<p>Reduction of pain and increased mobility.</p> <p>Initial VAS: 10</p> <p>Final VAS: 2</p> <p>Initial QIFR-Br: 34.78</p> <p>QIFR-BR Final: 98</p>	<p>Decreased overload and muscle tension</p> <p>VAS Start: 8</p> <p>VAS Final: 1</p> <p>Initial QIFR-Br: 65.54</p> <p>QIFR-BR Final: 100</p>

	Final: 72				
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*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 and improvement in posture.	Gain of respiratory mobility and improvement of the aesthetic and preventive aspect of poor posture.	Improved stamina, flexibility and balance. VAS Start: 7 VAS Final: 2	Reduction of muscle spasms. VAS Start: 9 VAS Final: 0 Initial QIFR-Br:	Increased joint mobility and body awareness. VAS Starter:6 VAS Final: 0

	Initial VAS: 8 - VAS Final: 2 - Qifr-Br Initial: 45.78 QIFR-Br Final: 70	VAS Start: 9 VAS Final: 1 Initial QIFR- BR: 36.00 QIFR-Br Final: 90	Initial QIFR- BR:28.89 QIFR-Br Final: 69	32.83 QIFR-Br Final: 72	Initial QIFR-Br: 44.76 QIFR-Br Final: 78
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*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.	Relief of pain in the spine and strengthening of body muscles.	There was an improvement in blood circulation	Reduction of edema.	It favored the complete execution of the movements.
	Initial VAS: 10	VAS Start: 7	VAS Start: 9	VAS Start: 7	VAS Start: 8
	VAS Final: 0	VAS Final: 3	VAS Final: 1	VAS Final: 0	VAS Final: 1
	Initial QIFR-Br: 32.67	Initial QIFR-Br: 56.73	Initial QIFR-Br: 48.97	Initial QIFR-Br: 67.56	Initial QIFR-Br: 59.55
	QIFR-Br Final: 95	QIFR-Br Final: 87	QIFR-Br Final: 90	QIFR-Br Final: 95	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	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.

	sessions.				
Main Results	<p>There was improvement in muscle tone and balance.</p> <p>VAS Initial: 7</p> <p>VAS Final: 0</p> <p>- Qifr-Br Initial: 45.56</p> <p>QIFR-Br Final: 90</p>	<p>Correction of inadequate postures and relief of muscle tension.</p> <p>Initial VAS: 8</p> <p>- VAS Final: 2</p> <p>- Qifr-Br Initial: 37.76</p> <p>QIFR-Br Final: 75</p>	<p>Improved quality of life.</p> <p>VAS Initial: 6</p> <p>VAS Final: 0</p> <p>- Qifr-Br Initial: 59.33</p> <p>QIFR-Br Final: 98</p>	<p>Improvement of pain and quality of life and reduction of inflammatory processes.</p> <p>VAS Initial: 7</p> <p>- VAS Final: 3</p> <p>- QIFR-BR Initial: 48.98</p> <p>QIFR-Br Final: 94</p>	<p>It promoted progressive changes on the physical and emotional levels.</p> <p>VAS Initial: 9</p> <p>- VAS Final: 1</p> <p>- Qifr-Br Initial: 24.59</p> <p>QIFR-Br Final: 74.35</p>

*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.

REFERENCES

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Comment [10]: This result is not clear.

Comment [11]: This is not a study of effectiveness. Caution must be taken when describing the implications of the study. If presented in a adequate way in Results, the conclusion should be that the results seem to indicate that pain and quality of life or functioning improved and in Discussion, the authors should discuss why they improved, what treatment, the modalities and frequency of treatment were most beneficial to the patients.

Comment [12]: This study is not about prevention. Caution should be taken.

Comment [13]: The tables as they are displayed do not show effectiveness. Please improve the presentation of your results with appropriate description of samples, demographics, mean and standard deviations of the results. Then, revise the Conclusion section.

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