




PHYSICAL EXERCISE AS A NON-PHARMACOLOGICAL TREATMENT FOR PEOPLE WITH FIBROMYALGIA

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ABSTRACT

Fibromyalgia is a chronic disease with a limited and challenging lack of concrete scientific information, since it is a pathology that is difficult to diagnose, which is often confused with other diseases and because it does not present proven evidence about its real appearance, affecting more the female gender. Physical exercise can be an alternative to promote the improvement of quality of life and independence (motor autonomy) in people with Fibromyalgia, in addition to possibly positively impacting individuals in many other aspects. The decrease in the use of pharmacological resources may be a beneficial consequence of the use of physical exercises in a systematic way. This review aimed to demonstrate the effects of physical exercise in patients diagnosed with fibromyalgia. According to the surveys conducted, scientific studies prove that the practice of physical exercise regularly and with adequate monitoring by a professional is effective and helps to reduce pain points (tender points), reduce the use of pharmacological resources, and improve quality of life.

Keywords: Fibromyalgia. Exercise. Pain.

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INTRODUCTION

Fibromyalgia (FM), according to Bulhões et al., (2018), is a rheumatic syndrome of unknown origin, its main characteristic is musculoskeletal pain, with pain sensitivity as a dysfunction. A prevalence of 2.5% was observed in the Brazilian population, with females (75 to 95%) of whom 40.8% were in the age group between 35 and 44 years old. FM has a major impact on quality of life, and can even limit people in their work environments and social life. The main complaints reported by people with FM are: intense pain spread throughout the body, sleep disturbance, fatigue, muscle stiffness, depression, and anxiety (Graminha et al., 2020 and Macedo et al. 2024).

According to Borges et al, (2021), the diagnosis of FM is the anamnesis made by the doctor because there is still no test to confirm it, it is common for people with this syndrome to take time to reach their real diagnosis, going through several doctors until they actually reach a rheumatologist and are guided and start some treatment. The treatment of FM is based on pharmacological and non-pharmacological strategies. Among the latter, physical exercise is in a prominent position because it is capable, mainly, of reducing pain and improving the quality of life of FM patients (Andrade et al, 2019).

Physical Exercise is the action of movement performed by the body in a planned and systematized way; There are many studies reporting its due importance and its benefits to those who practice it. The practice of physical exercise is the direct fight against sedentary lifestyle, which is directly linked to high cases of various chronic diseases. Physical inactivity is directly linked to risk factors associated with the development of several of these comorbidities (Ferreira, 2021).

According to Nahas (2017), in addition to being related to prevention, the practice of physical exercise is also related to the treatment of various diseases, acting in order to improve living conditions, improving functional reserve, autonomy and symptomatic condition of various diseases. This situation applies to FM syndrome (Arantes, 2022).

According to Nunes (2021), the prescription of exercises for this audience must take into account the biological individuality of each person and their limitations, as intense exercises can generate an increase in existing symptoms: such as pain and fatigue. Therefore, guidance should be done in an individualized way of low or moderate intensity. Thus, these discomforts and feelings of improvement begin from the eighth to the twelfth week of training.

In the course of the work, there are several studies that relate some practice with improvement, mainly related to the pain condition and the autonomy of the individual with it. However, the present article aims to demonstrate that, although we have already proven in the literature the impact of physical exercise on the treatment of FM, it remains unclear which protocol best serves this population in terms of the best prescription to lead to greater patient adherence to this valuable non-pharmacological treatment method.

METHODOLOGY

A literature review of works published in databases (Scielo, PubMed, Nature and other indexed journals in the health area) was carried out, in Portuguese and English, using documents published between 2014 and 2024 as reference.

Such materials were used for the conceptualization of FM, as well as physical exercise. Through this method it was also possible to find the relationship between the two items and how one interferes with the other.

The following descriptors were used for the search: "physical exercise", "fibromyalgia", "health" and "chronic diseases". To develop the table, we used as a criterion of comparison several modalities applied to people with FM.

RESULTS AND DISCUSSION

FM is a rheumatic syndrome, its origin is unknown, whose main characteristic is musculoskeletal pain, which has pain sensitivity as a dysfunction, thus amplifying its intensity. A prevalence of 2.5% was observed in the Brazilian population, with females (75 to 95%) of whom 40.8% were in the age group of 35 to 44 years (Bulhões et al., 2018).

Concepts suggest that FM is a heterogeneous condition, with multiple potential etiologies, such as "comorbid" diseases, functional somatic syndromes, anxiety disorders, depression, and some rheumatic diseases that are often frequent in people with FM (Häuser et al., 2015).

According to Helfenstein, Goldenfum and Siena (2012), the greatest diagnostic difficulty in differentiating FM from psychogenic rheumatism may be due to certain situations, in which the patient's clinical picture is a pure expression of a psychiatric disorder, particularly depression. Some symptoms of depression such as fatigue,

discouragement or insomnia are similar to those of FM. Perhaps this is one of the reasons that make many authors consider FM a manifestation of depression. However, it should be remembered that a good proportion of patients with FM do not have depression or any component of psychiatric disorder.

On physical examination, FM shows sensitivity in several anatomical points with no evidence of laboratory abnormalities. Because it has divergences in its symptoms, it makes it difficult to diagnose, going through several specialists until its final diagnosis. Borges (2021) states that its diagnosis is clinical, with the need for high suspicion by the physician in patients with a pain process for more than three months in the absence of pathological conditions that justify it. According to the *Fédération Internationale de Médecine Sportive* (2016), one of the main grounds for the diagnosis of patients with suspected FM is the existence of diffuse pain.

According to Souza and Perissinotti (2018), the complaints reported by people with FM, in most cases, were of intense and daily pain and with interference with sleep. Although the vast majority of cases report seeing doctors, the data contradict it. In common situations where there would be no pain, the person with FM may feel highly intense pain. According to Heymann (2010) and Macedo et al. (2024), in addition to pain, these patients usually complain of fatigue, sleep disorders, morning stiffness, paresthesias of the extremities, subjective sensation of edema, cognitive and psychic disorders, sexual problems, and the association with other chronic diseases and comorbidities.

Studies by Graminha et al. (2020) demonstrated that FM has a considerable impact on people's QoL quality of life, both in physical and psychological aspects. Pain intensity has a negative impact on QoL, thus increasing the likelihood of depressive symptoms. FM generally affects people of productive age (from 30 to 50 years old), that is, where they can still work, take care of the house and themselves, and when affected, these daily tasks can no longer be performed or, when performed, require a much greater effort for them, so QoL is reduced (Rodrigues et al, 2017).

According to Faria et al. (2014), for the treatment of this condition, there are a number of pharmacological and non-pharmacological alternatives, however, the best therapeutic results are obtained with the association of medication and non-pharmacological treatment. This combination, although it does not promote the cure of FM, helps to improve the condition of the disease and the QoL of these people.

After analyzing the results of the collected data, it was possible to emphasize that the different practices carried out by this public helped in some way to improve some of their symptoms, such as pain reduction, improved sleep, functional capacity, balance and mobility.

Currently, there are few physical exercise programs aimed at people with FM. With this in mind, we should consider some physical exercises that present significant improvements in the results presented, in the control of pain points and symptoms of this syndrome Table 1.

Table 1. Physical exercise protocols for patients with FM

Authors/Year of Publication	Sample	Mode	Methods	Results
Komatsu, Mariana et al; 2016.	20 women diagnosed with FM	Pilates	1h sessions twice a week for 8 weeks. They evaluated the 18 <i>tender points</i> (RCA), also evaluating the painful regions, pain intensity, quality of life, depression and anxiety.	Improvement in pain intensity and painful regions, through these results support pilates as a safe resource to improve pain in people with FM
Ericsson, et al; 2016.	130 women with FM, aged between 22 and 64 years.	Progressive resistance exercises.	Sessions 2x a week for 15 weeks. The five dimensions of fatigue were measured by collecting background and health-related questionnaires.	Improved physical fatigue and sleep efficiency in women with FM.
Collado-Mateo, et al; 2017	76 women between 30 and 75 years old with FM, divided into two groups, one control and one exercise intervention.	Exergames.	Sessions of 1 hour, 2x a week for 8 weeks. Through the VirtualEX-FM exergame, the group was stimulated by the researchers to perform activities of daily living.	Improvements in balance, mobility, and fear of falls in women with FM.
Andrade, et al; 2014.	13 patients (7 in the stretching group and 6 in the control group) with FM. The age between 48 and 56 years.	Lengthening.	12 sessions over 4 weeks. The following instruments were used for the study: a) Sociodemographic and Clinical Questionnaire (QSDC);	There were no significant improvements in the variables pain intensity and number of <i>tender points</i> in the two groups. Regarding the threshold of pain perception, there were

			<p>b) Evaluation of pain intensity, using the Visual Analogue Scale – VAS;</p> <p>c) Evaluation of pain threshold and number of <i>tender points</i> was used using a digital Fischer algometer (7).</p>	<p>no significant changes in the stretching group, but in the control group there were changes in the <i>tender points</i> right trapezius, left trapezius, right lateral epicondyle, right trochanter and right knee.</p>
<p>Oliveira and Vespasiano; 2021</p>	<p>Three women with FM aged 44 to 51 years did not practice physical exercise.</p>	<p>Aerobics.</p>	<p>To evaluate the results of FM patients after four weeks of training with water aerobics, a questionnaire was applied to assess pain before, during and after the practice of physical exercise.</p>	<p>After the exercise program, a decrease in symptoms was observed, improving quality of life and serving as a basis for new studies and research.</p>
<p>Araújo, et al; (2017).</p>	<p>16 women with FM who performed buzz for three months.</p>	<p>Zumba.</p>	<p>They underwent two weekly zumba dance sessions for three months. The sessions were held in a large room with air conditioning.</p>	<p>The practice of zumba brought several benefits to practitioners with FM, such as improved quality of life, functional capacity, and improved pain.</p>

Training with exercises carried out in a planned and appropriate way, respecting the biological individuality of each one, induces the improvement of their symptoms, and people with FM can then be prescribed.

It is worth mentioning that through these studies, for the treatment of this condition, it is necessary to associate pharmacological and non-pharmacological alternatives, requiring all possible professional help, such as psychological therapy, and adequate supervised training.

There is a probability that the number of patients with FM is much higher, given the difficulty of diagnosing the disease and the low visibility that the pathology has, which can be justified by its low prevalence when compared to other NCDs.

This factor can be a great motivator for this subject to gain more visibility in the scientific community, since the difficulty in finding information on the subject was also reflected at the time of the research and discussion for the preparation of the following work, since the area lacks a significant number of studies to guide its own training protocols.



FINAL CONSIDERATIONS

This study aimed to analyze how physical exercise can be used as a treatment for people with FM. There are different physical exercise programs. Based on the studies evaluated, it can be seen that each one contributes in some way to the treatment of FM. It is important to take into account the preferences of the patients in relation to the proposed activities, as the exercise practiced needs to be pleasurable for the patient both during and after the execution. We can conclude that the practice of physical exercise can help improve the symptoms of people with FM, taking into account their limitations, also respecting their unproductive and painful days, these practices should be moderate and systematized. Future research in this area may help uncover new intervention strategies to increase exercise adherence by people with FM. Further studies are needed on the effectiveness of physical exercise for them.

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