



Sleep Quality and Perception of the Disease in Fibromyagic Patients at the School of Physiotherapy Clinic of Gurupi University

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This work was carried out in collaboration among all authors. Authors RCA and VRN were the students' advisors and contributed writing and corrections beyond orientation during the practical part of the work. Authors EFMSA, LLM, LPB and AAB did data collections, bibliographic research and formatting of the manuscript. Authors ESRR, APFR, JAPT, GRR, JMS, MSCS, SDSCH and FGTL co-advisors, administered the analysis of the studies. All authors read and approved the final manuscript.

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ABSTRACT

Introduction: Fibromyalgia is a rheumatic syndrome that mainly affects women, being more common in the age group between 30 and 55 years of age, with reports of diffuse and chronic pain for more than three months. Despite the presence of hyperalgetic points called "tender points" there

is no evidence of deformities to organs and joints. Its confirmation is clinical after the exclusion of other pathologies.

Objective: The objective of this research aims to analyze the clinical picture and sleep quality in patients with fibromyalgia, coming from the School of Physiotherapy Clinic of Gurupi University.

Materials and Methods: The research has a qualitative and quantitative character, consisting of 22 female participants, divided into 2 groups: Experimental Group (EG – 11 participants) and Control Group (CG – 11 participants), all of whom came from the School of Physiotherapy Clinic of Gurupi University. For the collection of information, questions were used semi-structured, which were: 1) Identification form (prepared by academics to register participants and identify information about the previous history of the disease); 2) Questionnaire of perception of the disease (collected through an interview directed and recorded by undergraduates and later transcribed) and, 3) Pittsburgh's sleep quality index. The entire protocol was performed after 20 treatment sessions, both for the experimental group and for the control group, according to inclusion and exclusion criteria. The results were descriptively analyzed according to the tabulation in Microsoft Office® (2010) and inferential with significance $p < 0.05$, through the Program SPSS 18.0.

Results: The results show a decrease in the perception of the quality of life, through sleep quality. Discursive findings show the binding of fibromyalgia with depression, chronic pain and discouragement. The statistical results show a picture of little quality of restorative sleep because more than half of the interviewees say they take to sleep, have bad dreams and raise several times during the night. It is noteworthy that most volunteers said they could sleep more than 6 hours a night with sleep efficiency greater than 85%, only half of the sample confirmed eating, between 3 or more times, sleeping medications.

Conclusion: The reports analyzed showed the relevance in improving the quality of life of the participants undergoing treatment. However, the statistical data alone did not present a significant differentiation between the participants of the control group and the experimental group. Only when observing, sleep quality tends to be better for participants who are having a physiotherapeutic follow-up.

Keywords: Fibromyalgia; physiotherapy; sleep; pain.

1. INTRODUCTION

Fibromyalgia consists of a complex pathology with the characteristic of diffuse and chronic pain and the presence of hyperalgesic areas. Clinically manifested by the presence of painful points in the muscles, there is no inflammation or degeneration of the tissues, being a chronic non-progressive syndrome [1]. For more than 20 years after its emergence in 1824, fibrositis was called fibrositis, a characteristic inflammation of muscle rheumatism accompanied by specific muscle areas sensitive to digit pressure. In 1920 it was called myofascial, myofibrositis and neurofibrositis, with acute, subacute or chronic painful state of muscles, subcutaneous tissue, ligaments, tendons, and aponeurosis [2]. According to the studies of in the mid 1970, the first cases of fibromyalgia were evidenced, where the diagnostic criteria were reported through pain for more than three months throughout the body, presence of painful points in the musculature called "tender points", and digital pressure confirmed in 11 of 18 pre-established points [3].

According to the American College of Rheumatologist [4], the new diagnostic criteria reveal that the patient should have a generalized pain index with a score greater than seven, a severity index of symptoms including fatigue, non-restorative sleep, cognitive symptoms, and somatic symptoms with scores greater than five, in addition to the symptom index is greater than or equal to nine. Symptoms should have been present for at least three months and the patient should have no other problem explaining the symptoms. The difficulty of each patient in perceiving symptoms until medical demand and subsequent diagnosis takes a long time, generating depressive cases or other associated pathologies.

The improvement of physical and mental health in patients and necessary to combat depression and anxiety, as well as the awareness of patients about the disease and treatment with medical follow-up, to increase the quality of life of these people who have the Disease [5].

Sleep is necessary for energy replenishment and therefore its maintenance is important when

there are disturbances and diseases such as fibromyalgia can help to increase these disturbances. In human life sleep and fundamental for energy replacement due to mental and physical fatigue during the day, sleep disorders can impair health and studies related to the relationship of fibromyalgia with sleep disorders and with decreased pain treatment as well as sleep had a higher quality [6].

Sleep disorder is among one of the main complaints in fibromyalgia patients, which may trigger: insomnia, fatigue, and chronic headache. Among the night complaints, the most common are difficulty in starting sleep, frequent awakening at night, difficulty resuming sleep, restless and superficial sleep and early awakening. As a consequence, non-restorative sleep and tiredness contribute to the decrease in quality of life [7].

Physiotherapy seeks the prevention of diseases such as further treatment, guiding the patient to changes that increase the quality of life, which is why physiotherapy not only works in the treatment but in disease prevention [8].

Hydrotherapy is of great importance for the treatment of fibromyalgia, promoting the impact of pain, the reduction of tender points, muscle and mental tiredness, as well as depression, besides promoting the sleep of patients who have the same impact on quality of life. of these people, and more research to show more benefits of hydrotherapy in the treatment of fibromyalgia [9].

For the control of widely used transcutaneous electrical nerve stimulation (TENS) pain, adherent fiber stimulation inhibits transmission of some second-order neurons in the dorsal horn, as well as pain transmission, patients with sore throats caused by Fibromyalgia has been shown after treatment with acupuncture or increased activity of inhibitory neurons, so TENS may have benefits in the use of fibromyalgia [10].

In addition to transcutaneous electrical nerve stimulation (TENS) through acupuncture, and interferential current may be an alternative as it is advantageous for improving sleep and improving sleep quality [11]. Some studies use the use of interferents combined with ultrasound, showing more expressive results in the treatment of pain than treatment or separate treatment, thus reducing the treatment time, such applications may be beneficial in the treatment of fibromyalgia [12].

As said earlier one of the techniques for the treatment of fibromyalgia syndrome (FMS) and acupuncture where one of its mechanisms already proven by western medicine is analgesic action as in combating disorders such as pain and sleep that interferes with the patient's daily life, intervention with The use of acupuncture reduced fibromyalgia disorders, as well as the physical treatment (PT) acupuncture, achieved good results but the two did not differ from each other, more clearly we can use them to treat fibromyalgia [13].

Given this diffuse scenario on how to treat and monitor this condition, it is necessary to seek information about the daily life of these patients, how they understand the disease and the strategies used to cope with this syndrome. Therefore, the objective of this research is to analyze the clinical condition and sleep quality in patients with fibromyalgia at the Gurupi University School of Physiotherapy.

2. MATERIALS AND METHODS

This is an applied study, with descriptive and field, qualiquantitative and cross-sectional methods, with the use of 2 groups: Experimental Group (EG) – 11 participants, and Control Group (CG) – 11 participants, all of whom came from the Clinic School of Physiotherapy of the University of Gurupi – TO - Brazil.

The researchers were properly identified and responsible for applying the questionnaires through interviews, based on previous training in order not to interfere with the answers, only clarifying questions of the participant's questions about the questions asked. Researchers Eliara Firmina Maria Silva Alves were applied to the participants in the treats of the physiotherapeutic and researcher Leivia Lima de Moraes to the participants waiting for care.

Data were collected from March to September 2018, where data were obtained through questionnaires and interviews conducted at the Physiotherapy School Clinic of Gurupi University, Gurupi, Tocantins, Brazil, due to the infrastructure and presence of the required population.

According to the diagnosis of fibromyalgia, the sample population was selected in the register of CEF participants from Gurupi University. As cries of inclusion, participants with the rheumatological medical diagnosis were elected and who sign the Free and Informed Consent

Form (FICF). Participants who had difficulty understanding the questions and, therefore, presented incoherent answers to the context analyzed were excluded from the sample.

Randomly, the patients were selected for the presentation of the research and clarification of doubts about their participation and can be interrupted at any time, without any kind of burden to it. Being aware of their participation in the research, they signed the FICF. The sample of the research consisted of 22 participants interviewed, all-female, aged between 27 and 73 years (mean 50 years). This document was prepared in order to report the objectives, procedures, risks, and benefits of the study, in order to obtain the signature of participants for cooperation in the project voluntarily, giving undergraduates the guarantee of the use of information, only for research purposes, without the intention of stigmatization.

Through the Participants Identification Form, the following data were obtained: identification, address, city, telephone, gender, age, profession, educational level, marital status, symptom time, history of diagnosis and treatments, and other cases in the family.

Theory Quest for Disease Perception was a reproduction of the research by Gadelha Severino, et al. [14], containing the following guiding questions: 1) Currently how you define yourself as a person with fibromyalgia? 2) Describe how you understand fibromyalgia? 3) What do you think of physiotherapy treatment? 4) In relation to your illness, what are your expectations, what do you expect for the future? 5) How do you see the posture and knowledge of physiotherapy professionals regarding your disease?

The answers to this questionnaire were recorded by a recorder of the brand Digital Recorder® Dvr, 8 gb, with Mp3, no time limit and later transcribed. The response of the answers allowed the inferential analysis of the terms that characterized each question.

The Pittsburgh Sleep Quality Index validated by Bertolazi and Alegre [15] is composed of ten questions and aims to evaluate the individual's sleep quality in the month leading up to the application of the questionnaire. Questions one through four are open and questions from five to ten are objective questions. Enter question five, ten questions are covered ranging from the letter A to J. The questionnaire questions form seven

distinct components, which can be scored on the scale from zero to three points. The seven components are obtained by mathematical calculations and then added and classified as follows: zero to four points "good sleep quality"; five to ten points "poor sleep quality" and eleven to twenty-one points "presence of sleep disorder".

Each component has a specific evaluation: the first refers to the subjective quality of sleep; the second sleep latency; the third to sleep duration; the fourth to the usual efficiency of sleep; the fifth to sleep disorders; the sixth to the use of sleeping medication and the seventh to daytime sleep dysfunction. Thus, the researcher directs the question in an interview with the participant, and the answer is transcribed at the time of questioning. The maximum possible score in PSQI is twenty-one points and the higher the score, the worse the sleep quality.

The collection of this information allows a diagnosis of the disease condition and can help in the identification of more appropriate treatments that allow the reduction of pain and improvement in the quality of life of participants suffering from fibromyalgia. Therefore, the information was analyzed using descriptive statistics with percentages, exposed in the form of tables and graphs.

3. RESULTS AND DISCUSSION

The results were analyzed descriptively according to tabulation in Microsoft Office® (2010) and inferential with significance $p < 0.05$, through the Program SPSS 18.0, demonstrated through bar graphs and tables. through the Program SPSS 18.0. The results of this search are presented in two steps: The first is the presentation of the questionnaire that measures the Pittsburgh Sleep Quality Index. The second stage consists of the presentation of the results of the Disease Perception Questionnaire, evidencing information about depression, stress, emotional exhaustion, pain, the participation of the physiotherapist to relieve pain, the search for more effective treatments, knowledge, dedication, and respect for pain.

The sample of the research consisted of 22 participants interviewed, all-female, aged between 27 and 73 years (mean 50 years).

As the participants answered in the identification form, for educational level: 3 (13.64%) have an

elementary school, 13 (59.09%) have high school and 6 (27.27%) have higher education.

Regarding occupation, we can observe in graph 2 that, 14 (63.64%) are employed and 8 (36.36%) don't work. Of the participants 5 (22.73%) are single, 13 (59.09%) married, 2 (9.09%) divorced and 2 (9.09%) visuals. Only 8 (36.36%) have a history of fibromyalgia in the family.

For the experimental group, there were more than 20 sessions of physiotherapeutic care. The participants of the control group presented symptom time on average of 14 years and with a diagnosis time of 10 years, while in the experimental group she presented the symptom time on average 8 years and diagnostic time of 4 years.

3.1 Sleep Quality

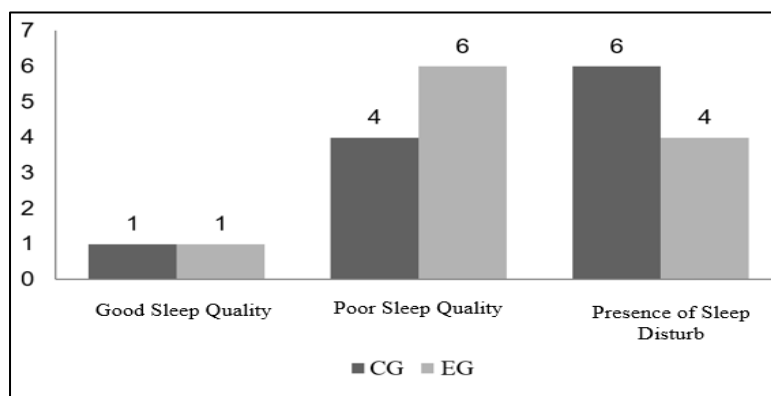
Sleep is essential for the maintenance of human life, since it restores the body, conserves energy and protects the musculature. A night of sleep barely slept influences the daily activities, both on the physical and emotional performance of any individual. In the specific case of patients with fibromyalgia, a deficient sleep further aggravates the pain and stiffness of the body, influences the quality of life, in the sense of humor, in relationships with other people.

Insomnia symptoms are linked to the risk of fibromyalgia and chronic pain in adult women [16]. Symptoms include chronic pain, persistent fatigue, generalized morning stiffness, subjective sensation of joint swelling, intentional headaches, irritable bowel syndrome, and

dysmenorrhea, and non-restful sleep. These treated symptoms can be alleviated to improve patients' sleep quality [17]. The combination of all these factors interferes with the decrease in quality of life since sleep function as restorative of the organism was not performed and the individual will have accumulated tiredness.

Sleep-deprived patients compromised in their activities, sleep deprivation can cause difficulty concentrating, difficulty touching, inability to solve problems, irritability and mood swings, memory problems [18]. Sleep deprivation can, therefore, cause physical symptoms such as burning eyes and heavy eyelids, headache, and increased hunger, such as cognitive symptoms of irritation, lack of concentration and anxiety, and each patient needs to have a certain amount of sleep to sleep. avoid these disorders [19]. In this sense, it is important to study the conditions of fibromyalgia patients and new forms of treatment, aiming to improve sleep quality and quality of life of these patients.

The first item analyzed refers to sleep quality, component 1 of the Pittsburgh Sleep Quality Index (PSQI). Through this questionnaire, it was possible to collect the levels of subjective quality of sleep. For the control group, the following frequency was verified: 1 participant (9%) with good sleep quality, 4 (36%) with poor quality and 6 (54%) with sleep study, and for the experimental group: 1 participant (9%) with good sleep quality, 6 (.54%) with bad quality and 4 (36%) with sleep study. As can be observed in Graph 1, thus, to say that participants with therapeutic follow-up achieve a better deepen, when compared to participants without follow-up, it is appropriate.



Graph 1. Component 1, sleep quality of the Pittsburgh Sleep Quality Index (PSQI) questionnaire of fibromyalgia participants from Gurupi - TO, 2018

Source: Prepared by the authors

Table 1 describes the data on sleep latency, evaluating the number of minutes in which participants take time to sleep and how many times a week could not sleep in up to 30 minutes, with observations for the control group and for the experimental group.

It was observed that in both groups there was a delay of 15 to 30 minutes to sleep in most cases, 10 participants (90%) in the control group and 7 participants (63%) in the experimental group. Regarding the frequency of this delay in sleeping at night in the week, most reported the situation of 2 to 3 nights per week, which occurs in the 5 cases (45%) in the control group and 7 cases (63%) in the experimental group.

The results expressed in Graph 2 refer to sleep latency. It was verified that most participants took about 30 minutes to sleep for both groups surveyed in the week of data collection. The same was verified for the delay in sleeping during the reference month, where 7 participants of the experimental group and 5 of the control

group stated that it took more than 30 minutes between 2 and 3 times a week. This fact reflects the diffuseness of the participants in being able to relax to sleep, right when they lie down.

In Table 2, presents the components 3 and 4. Component 3 allows the understanding of sleep duration, while component 4 contributes to elucidations related to sleep efficiency, as it is composed of the number of hours slept and the number of hours between bedtime and getting up.

As observed in Table 2, for sleep duration, 7 participants (63%) of the control group sleep more than 7 hours per night, while of the experimental group 10 participants (90%) sleep in from 6 more hours a night. For the analysis of sleep efficiency, the participants of the control group presented a sleep efficiency greater than 85%, while only 9 (81%) of the experimental group stated that they had sleep efficiency. Sand makes it interesting to point out, that only 1 participant (9%) of the control group reported having a sleep efficiency of less than 65%.

Table 1. Withponent 2, sleep latency of the Pittsburgh Sleep Quality Index (PSQI) questionnaire of fibromyalgia participants of Gurupi - TO, 2018

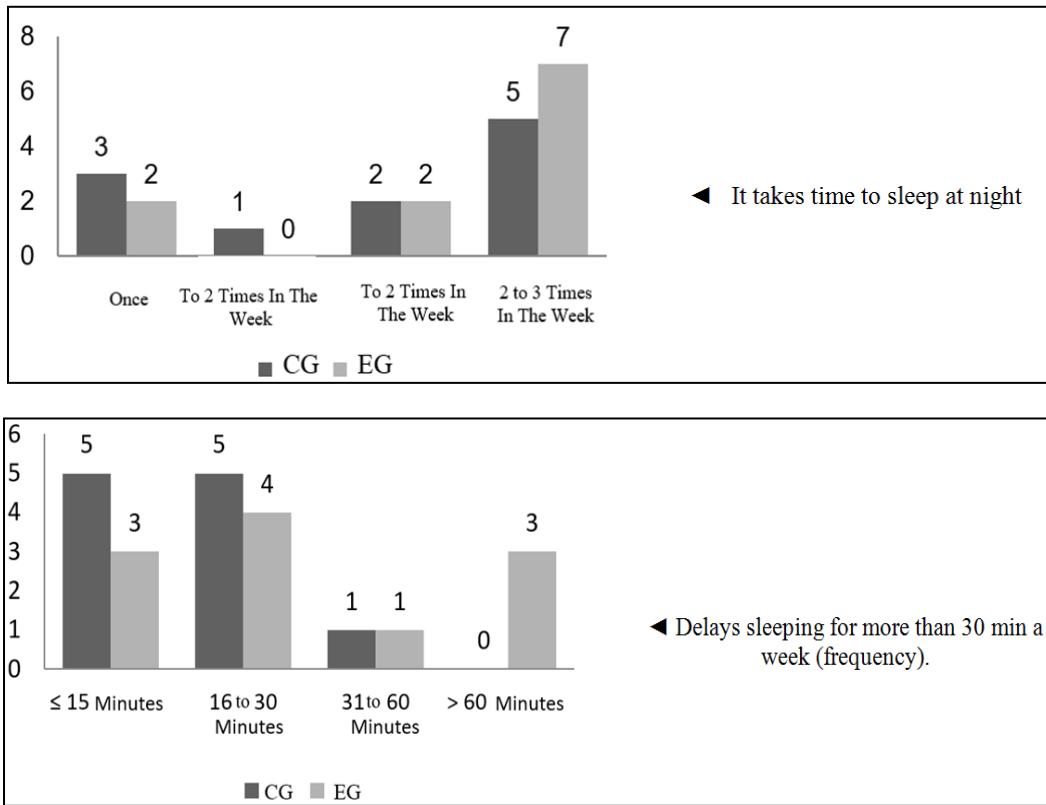
Components	Control group		Experimental group	
	Quantity	%	Quantity	%
It takes time to sleep at night				
≤ 15 Minutes	5	45,45	3	27,27
16 to 30 Minutes	5	45,45	4	36,36
31 to 60 Minutes	1	9,10	1	9,10
> 60 Minutes	0	0,00	3	27,27
Delays sleeping for more than 30 min a week (frequency)				
Not once	3	27,27	2	18,18
1 time in the week	1	9,10	0	0,00
1 to 2 times a week	2	18,18	2	18,18
2 to 3 times a week	5	45,45	7	63,64

Source: Prepared by the authors

Table 2. Component 3 and 4, duration and usual sleep efficiency of the Pittsburgh Sleep Quality Index (PSQI) questionnaire of fibromyalgia participants from Gurupi - TO, 2018

Components	Control group		Experimental group	
	Quantity	%	Quantity	%
Sleep duration				
> 7 hours	7	63,63	5	45,45
6 to 7 hours	3	27,27	5	45,45
5 to 6 hours	1	9,10	1	9,10
< 5 hours	0	0,00	0	0,00
Usual sleep efficiency				
> 85%	11	100,00	9	81,80
75 to 84%	0	0,00	1	9,10
65 to 74%	0	0,00	0	0,00
< 65%	0	0,00	1	9,10

Source: Prepared by the authors



Graph 2. Component 2, sleep latency of the Pittsburgh Sleep Quality Index (PSQI) questionnaire of fibromyalgia participants from Gurupi - TO, 2018

Source: Prepared by the authors

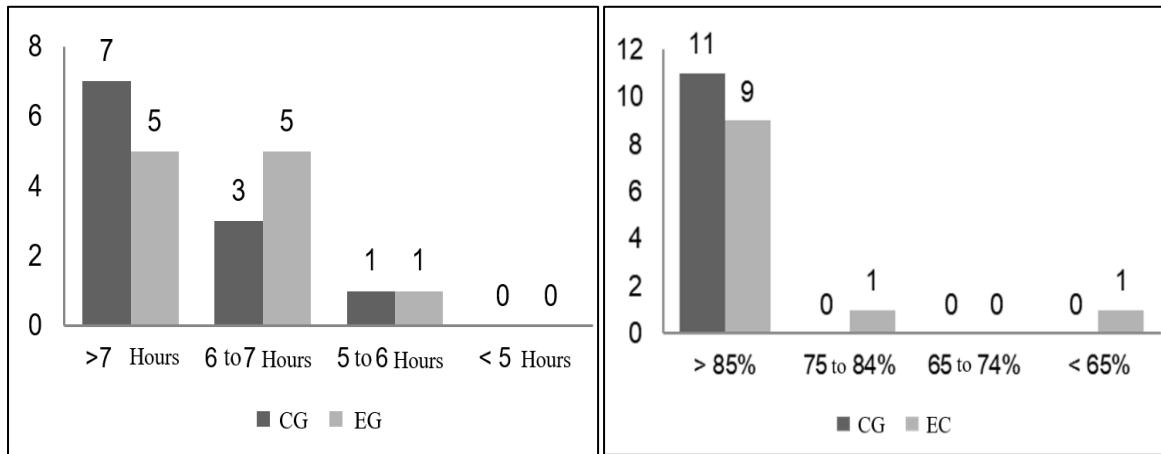
These results can be viewed in Graph 3. The participants, 7 of the control group and 5 of the experimental group were able to have a sleep duration of more than 7 hours, most of the participants in both groups reported having a habitual sleep efficiency above 85%. These data show that despite the disease, the research participants were able to sleep and rest during the analyzed period.

Beauty 3 presents component 5 of PSQI, which deals with sleep disorders, with information about pain, bad dreams and wake up in the middle of the night. For component 5 sleep disorders, all the pay ware of the control group woke up in the middle of the night and felt pain, of these, only 7 participants (63%) reported having bad dreams. For the experimental group 10 patients (90%) wake up in the middle of the night, and all 11 (100%) reported pain, in addition to 9 (81%) reported having bad dreams.

Graph 4 represents the results of sleep disorders for the research participants. In all categories, almost all participants independent of the group presented sleep disorders. In the control group,

they all woke up in the middle of the night, felt pain and 7 had bad dreams; in the experimental group, 11 felt pain, 10 woke up during night sleep and 9 had bad dreams. This fact reflects the difficulty of participants in resting and having a peaceful sleep.

Table 4 presents the results for components 6 and 7, on the use of sleeping medications, dysfunction during the day and problems to remain enthusiastic, for the group's control and experimental. This analysis shows that for both groups, almost half of the participants need to ingest medications to help them catch sleep. It was verified that the participants of the experimental group presented better results than the control group, about being able to stay awake during the day, this fact may be the result of therapeutic follow-up that contributes to the improvement in the quality of life of these participants. For the analysis of enthusiasm, the presence of the difficulty of both groups in getting excited was clear, this fact can be a reflection of a night of sleep, constant bodily pain and the depressive picture associated with the problem.

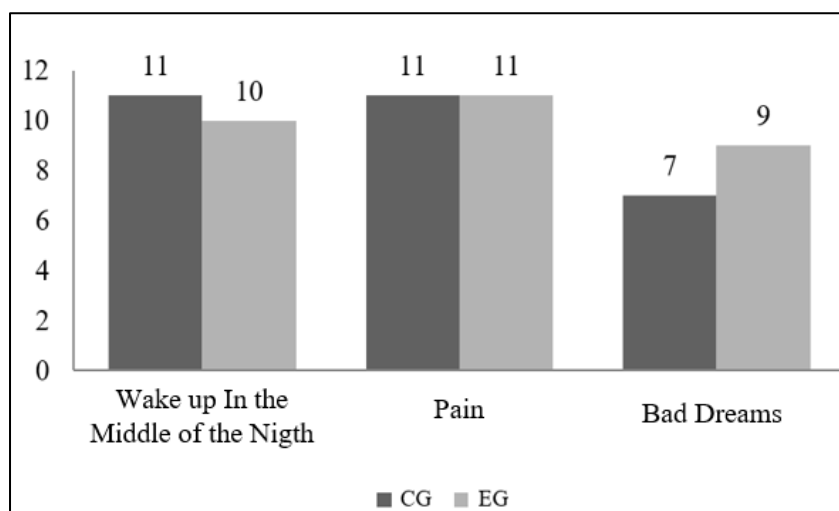


Graph 3. Component 3 and 4, duration and usual sleep efficiency of the Pittsburgh Sleep Quality Index (PSQI) questionnaire of fibromyalgia participants of Gurupi - TO, 2018

Source: Prepared by the authors

Table 3. Component 5, sleep disorders from the Pittsburgh Sleep Quality Index (PSQI) questionnaire of fibromyalgia participants from Gurupi - TO, 2018

Components	Control group		Experimental group	
	Quantity	%	Quantity	%
Sleep duration				
> 7 hours	7	63,63	5	45,45
6 to 7 hours	3	27,27	5	45,45
5 to 6 hours	1	9,10	1	9,10
< 5 hours	0	0,00	0	0,00
Usual sleep efficiency				
> 85%	11	100,00	9	81,80
75 to 84%	0	0,00	1	9,10
65 to 74%	0	0,00	0	0,00
< 65%	0	0,00	1	9,10



Graph 4. Component 5, sleep disorders from the Pittsburgh Sleep Quality Index (PSQI) questionnaire of fibromyalgia participants from Gurupi - TO, 2018

Source: Prepared by the authors

Table 4. Components 6 and 7, use of sleeping medication and dysfunction during the day of the Pittsburgh Sleep Quality Index (PSQI) questionnaire of fibromyalgia participants of Gurupi - TO, 2018

Components	Control group		Experimental group	
	Quantity	%	Quantity	%
Use of sleeping medicine				
Not once	5	45,45	4	36,37
Less than 1 time a week	0	0,00	2	18,18
1 to 2 times a week	0	0,00	0	0,00
3 times a week or more	6	54,55	5	45,45
Dysfunction during the day				
Problems staying awake				
Not once	3	27,27	8	72,72
Less than 1 time a week	5	45,45	2	18,18
1 to 2 times a week	1	9,10	1	9,10
3 times a week or more	2	18,18	0	0,00
Problems to stay excited				
No	1	9,10	3	27,27
Take	2	18,18	2	18,18
Moderate	3	27,27	4	36,37
Much	5	45,45	2	18,18

Source: Prepared by the authors

All component analyses to measure sleep quality are in accordance with the findings in the literature on the topic addressed. There is a prevalence of cases of fibromyalgia in female individuals, between the adult age group, between 30 and 55 years of age. The main symptom of this pathology is related to sleep disorders. In the research, the total results showed that 45% of the participants presented sleep disorders, 45% poor sleep quality, 10% good sleep quality, however among participants who reported having a good sleep quality, there are complaints regarding sleep, which is frequent in patients with fibromyalgia.

Insomnia is another symptom verified in people with sleep disorders. The average need for sleep among adult's ranges from 5 to 8 hours a day, and there are people who do not feel completely satisfied with their sleep needs less than 7 hours a day. reported being able to sleep more than 6 hours a night, with an efficiency of more than 85%.

Difficulties in starting sleep, waking up several times at night and having difficulty falling asleep, early awakening and sleepiness during the day, are other symptoms linked to sleep disorders.

The frequency of awakening at night was evidenced at work due to pain and bad dreams. This result expires in sleep inefficiency as the body's restorer for everyday activities.

All this collection of the results of the PSQI questionnaire indicates the inefficiency of sleep that can have effects on quality of life, as it can interfere in the physiological and health condition of the participants analyzed. What is perceived is that when these symptoms not treated in fibromyalgia patients generates a tendency of a symptom to aggravate another symptom, which aggravates another symptom consecutively, in an endless sentence, that is, the quality of life is influenced by the pain and hours slept, and the more pain and fewer hours slept, the lower the quality of sleep.

3.2 Perception of the Disease

To obtain the result of the perception of the disease in fibromyalgia participants inserted in or not in the physiotherapeutic treatment was utilize of the questionnaire of perception of the disease through semi structured interview of, recorded and transcribed, and subsequently presented the following questions: Currently as the lady is defined as a person with fibromyalgia? Describe how you understand fibromyalgia? What do you think of physical therapy treatment? As far as your illness is concerned, what are your expectations, what do you expect for the future? How do you see the posture and knowledge of physiotherapy professionals regarding your disease?

Through the results found, five categories emerged: Depression and stress; Emotional

wear and pain; The importance of physiotherapy to relieve pain; In search of effective treatment; Knowledge, dedication and respect for pain. To maintain anonymity, participants were identified as GC1 to GC11 for the Control Group, and GE1 to GE11, for the Experimental Group. The following will be displayed the data of the five categories.

The main complaint presented by the research participants was depression, this, pain, and emotional trip. In the category "depression and stress" the participants defined as depressive and stressed people regardless of crises, they were intended to continue to develop their daily activities. As relates:

"Today, I can tie myself with the pains, morning mood and stress I bother dawn to the days with bad mood" (GE10).

"I feel stressed, weary, sometimes with lack of patience because of the pains I have been unwell and anxious." (GC4).

Stress can be understood as the combination of complex psychophysiological and behavioral reactions, where the body should respond to a threatening situation. Stress occurs when there is a need for the body to react to some demand that goes beyond its adaptive competence, causing an emotional imbalance. In patients diagnosed with fibromyalgia, any sudden alteration goes beyond the adaptive capacity of the body, intensifying the effects. stress is derived from daytime tiredness or simply by cognitive or emotional stressors, stresses can be divided into phases: alarm reaction (when alerting and contacting the stressor), resistance phase (and prediction of permanence for stress), near exhaustion Phase (weakening of the body that cannot adapt or resist stress), Phase of resistance (or organism that cannot overcome the weakening and can trigger clinical and mental problems) [20].

Depression is understood as a syndrome or affective state of sadness, arising from several clinical conditions, such as post-traumatic stress disorder, alcoholism, schizophrenia, dementia, clinical diseases and response to stressful situations. Depression causes mood change, generates sadness, irritability, lack of ability to feel emotions, reflects cognitive, psychomotor and vegetative ability (sleep and appetite), presenting itself to varying degrees [21].

For fibromyalgia patients, their evolution may increase anxiety, depression, and pain, such as dilution of sleep quality [22]. Pain relief causes physical, emotional and psychic distress, making it difficult for patients to live their daily lives. It also excludes social exclusion, which can cause depression in patients with fibromyalgia, changes in habits that may contribute to the restoration of emotional balance. improve fitness, sleep fatigue and maintain information on the subject [23].

In the category "emotional wear and pain" the participants report that fibromyalgia pains lead to emotional exhaustion hindering activity of daily life. According to the participants:

"Disease that causes a lot of pain and that does not appear in tests, so people do not believe in us and do not lead them to emotional exhaustion" (GE3).

"It's a disease that causes pain in need of medication and performing physical activity, I'm aware that I can't go without exercising" (GE10).

The International Association for the Study of Pain [23] defined pain as an unpleasant sensory and emotional experience linked to actual damage. For chronic pain, the effect of this symptom can prevent social interaction and prevent the patient from performing simple activities and prevents him from seeking treatment. Here it is worth mentioning the trend of a vicious circle of pain, which is fueled by lack of activity, fear, depression and more pain.

Pain can be the result of a manifestation of personal suffering, request for help/attention, the flag of desires or needs [24]. These symptoms, when recognized in patients with fibromyalgia, can result in a negative impact on patients' daily lives because they interfere in the routine of these people in the same way as episodes of stress and depression [25].

The pain fibromyalgia patients report is different from any other sensory impression. It is closely linked to several factors that can increase the degree of pain sensation, among them are psychological issues, social and cultural aspects. And that together and in each patient can interfere in a unique way, hindering clinical diagnosis and demanding different therapeutic treatments [26].

The category "the importance of physiotherapy for pain relief" shows us the efficacy that occurs in the treatment with a physiotherapist, which together with aggregation to other clinical treatments, aims to work to reduce symptoms. Physiotherapy treatment seeks to reduce pain by improving functional skills, playing an important role in the prevention and rehabilitation of the patient. The reports report that:

"Very good! Mand makes feeling good and improves sleep quality" (GE5).

"Very good, especially when the professional knows how to listen and respects the patient's pain"(GC10).

Participants know that fibromyalgia has no cure and is aware that symptoms can be mitigated through the most appropriate treatment for each case. The research participants stated that the physiotherapist's follow-up proved relevant for the acceptance and perception of the disease improving sleep quality and other symptoms that match fibromyalgia.

Physical therapy treatment is effective against the symptoms of fibromyalgia, such as pain, sleep disorders among others. As regular exercise patients have improved satisfaction and decreased pain and depression, improving mood so aerobic conditioning has therapeutic effect improving ischemic and metabolic changes in the Tender points' locations, improving mental state so patients have a style life without depends so much on conventional treatments [27].

The category "In search of effective treatment" raises the question that participants reported having a life expectancy that can discover healing, and thus improve pain and fatigue resulting in the best quality of life, as the answers point out:

"I expect to be cured, in which a study is developed to find medicine. Today many take advantages of the situation offers the cure and deluding people" (GC2).

"My perspective has to do with my religious convictions. I believe that all health problems will be solved not by human hands" (GE5).

In seeking for the best treatment of fibromyalgia, various combinations of pharmacological and non-pharmacological treatments are used, and

studies indicate that pharmacological treatment is more effective but may have adverse effects that harm patients, and the central treatment of drugs is necessary. By using exercise to reduce fibromyalgia symptoms, exercise is an alternative for patients not to be dependent on medications as other types of treatments may help, and a balance between pharmacological and non-pharmacological treatments is needed [28].

Acupuncture combined with massage and useful activities such as water aerobics can have a positive effect on the treatment of this condition, as well as cognitive behavioral therapy, by doing exercises in specific body regions with heat, pressure, laser and needles demonstrated that either acupuncture adjuncts pain was performed by 30% compared to standard therapy [29].

The category "Knowledge, dedication and respect for pain" brought reports of participants about the knowledge that the physiotherapeutic possess on fibromyalgia and their posture as a professional for the performance of treatment with good results. The physiotherapist has as main instrument the hands, which through touch, care, rehabilitate, comfort and heal. Moreover, they can resort to other physiotherapeutic intrusions in the search for better results. The reports show that:

"I realized a very great interest. I was met by two different people and noticed that some different goals, other paths to solve the problem, I see studies progressing" (GE5).

"In my opinion, physiotherapists are more aware of fibromyalgia than physicians by dealing more with the situation" (GC2).

Participants reported being aware of the importance of physiotherapy in their functional condition. The answers emphasized the need to know the disease, understand its symptoms and seek more effective means to overcome and/or reduce pain thus expanding the quality of life. The follow-up of the physiotherapist professional is a very effective means for elucidating these issues.

4. CONCLUSION

The research evaluated the perception of fibromyalgia participants selected at the Clinic School of Physiotherapy of Gurupi University by identifying the clinical picture and sleep quality,

seeking to understand how fibromyalgia influences the lives of these participants.

It was found that the quality of life of fibromyalgia participants is closely related to pain, stress, depression, emotional exhaustion and sleep quality. These results were confirmed by descriptive and statistical analyses of the information passed on by the twenty-two participants of this scientific investigation.

The statistical results, to measure sleep quality, showed no significant difference between the participants of the control group and the experimental group in most of the analyses. For sleep quality, it was verified that participants take a long time to sleep, had bad dreams and raised several times during the night. In most cases, sleep duration is on average 6 hours per night, with restorative sleep efficiency greater than 85%, only 45% use sleep-induced medications, 3 more times a week.

For sleep latency, there was also no significant difference between the groups studied. It was found to take 30 minutes to sleep in the reference week, occurring 2 to 3 times a week in the month studied. This infers that despite the disease, the participants were able to sleep during the analyzed period.

About sleep disorders, participants reported that they woke up in the middle of the night, felt pain and had bad dreams. These results were seen in more than half of the participants surveyed in both groups. The one found in the research only reflects the difficulty of participants in resting and having a peaceful and restorative sleep.

For dysfunction during the day, the participants of the experimental group presented better performance than in the control group, managing to stay awake during the day. With regard to enthusiasm, there was the difficulty of all participants in keeping themselves enthusiastic, which suggests coming from a night of bad sleep, from constant physical pain, in addition to the depression caused by the disease.

The descriptive results, derived from the disease perception questionnaire, showed the discernment of the participants with the acceptance of the disease and the various forms of treatment. The report of the participants analyzed showed the relevance of physiotherapeutic treatments to improve quality of life, indicating the importance of the

physiotherapist professional in the rehabilitation of fibromyalgia.

Overall, the analyses showed that participants with physiotherapeutic follow-up can have a better, even if small, compared to participants without adequate follow-up, in the same way as the perception and acceptance of the disease contribute to the search for more effective treatments and increased quality of life.

CONSENT

As per international standard inform and written Participants consent has been collected and preserved by the author(s).

ETHICAL APPROVAL

The present study was submitted to the Ethics and Research Committee of the University of Gurupi and was approved under the mere number of protocols 2.539.887, following the conformities of resolution 466/12, referring to research involving human beings.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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