Experience with women with fibromyalgia who practice zumba. Case reports

Experiência de mulheres com fibromialgia que praticam zumba. Relato de casos

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ABSTRACT

BACKGROUND AND OBJECTIVES: Different types of exercises are being used for the treatment of fibromyalgia, such as aerobic, resistance, flexibility exercises and body awareness therapy, but there is strong evidence that the gold standard for the non-pharmacological treatment of this disease is the aerobic exercise. The objective of this study was to collect reports of patients with fibromyalgia who practiced three months of dance (Zumba) and had to stop dancing for three months due to the recess of the academic activity at the end of 2016 and beginning of 2017.

CASE REPORTS: This is a qualitative study about the experience of 16 women with fibromyalgia, who participated in Zumba class for three months in 2016. The reports were collected when they resumed their dance activities in March 2017. Therefore, the patients remained with no intervention for three months, during the academic recess. The patients wrote their reports on a sheet of paper, answering three questions. According to the reports, we noticed that Zumba brought several benefits for these patients, such as pain relief, improved sleep quality, self-esteem and physical performance.

CONCLUSION: Based on patients' reports we can conclude that Zumba, as a three-month intervention, produced positive effects in improving pain, functional capacity, and quality of life of women with fibromyalgia.

Keywords: Aerobic exercise, Fibromyalgia, Zumba.

RESUMO

JUSTIFICATIVA E OBJETIVOS: Diferentes tipos de exercícios estão sendo usados para o tratamento da fibromialgia, tais como, o exercício aeróbico, treinamento resistido, exercício de flexibilidade e terapia de consciência corporal, mas existe forte evidência que o padrão-ouro para o tratamento não farmacológico dessa doença é o exercício aeróbico. O objetivo deste estudo foi coletar relatos de experiência de pacientes com fibromialgia que praticaram três meses de dança (Zumba), e tiveram que suspender a dança por três meses devido ao recesso da atividade acadêmica no final de 2016 e início de 2017.

RELATO DOS CASOS: Este é um estudo de abordagem qualitativa, sobre um relato de experiência de 16 mulheres com fibromialgia, que realizaram três meses de zumba no segundo semestre de 2016. Os relatos foram coletados no retorno das atividades em março de 2017, desse modo, as pacientes ficaram três meses sem a intervenção durante o recesso acadêmico. Os relatos das pacientes foram escritos por elas em uma folha, respondendo três perguntas. De acordo com os relatos foi percebido que a zumba trouxe vários benefícios para essas pacientes, como alívio da dor, melhora na qualidade do sono, autoestima e desempenho físico.

CONCLUSÃO: Baseado nos relatos das pacientes, podemos concluir que a zumba como intervenção realizada por três meses, produziu efeitos positivos na melhora da dor, da capacidade funcional e da qualidade de vida de mulheres com fibromialgia.

Descritores: Exercício aeróbico, Fibromialgia, Zumba.

INTRODUCTION

Fibromyalgia (FM) is a chronic and painful disease of a complex multifactorial etiopathology, as yet not entirely known. The main symptom found in patients with FM is the presence of pain in several tender points scattered around the body, over a period of at least three months. The occurrence of this disease in Brazil stands at 2.5%. The disease affects mainly women aged between 30 and 50 years old[1-5].

Some research studies of recent decades show that there are several factors within the physiopathology of FM, including changes to the brain and its structure; neural function; muscular physiology; hormonal factors; and genetic influence. There is growing evidence that shows that people with FM experience pain in a different way from the general population, due to the dysfunctional processing of pain in the central nervous system[6]. Its symptoms are many and can be associated with fatigue, sleep disorders, cognitive systems[1], anxiety, and depression. In addition, some cases may show gastrointestinal symptoms (irritable bowel syndrome) and somatosensorial problems such as hyperalgesia, allodynea, and paresthesia. All these symptoms negatively affect the quality of life (QoL) of the individual, affecting the quality of sleep, the ability to carry out activities of daily life, and productivity at work. In addition, it affects the dynamics of the family unit and harms the individual person's independence[6].

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Women with FM have already shown that they have harmed physical capacities and that physically they are less active when compared with healthy people, having an impact on the QoL of these people[4].
Therefore, for the treatment of FM to be beneficial and to bring more positive results, a multidisciplinary approach is needed. This must involve everything from the education of the patient to illness, pharmacological treatment, taking physical exercise, and behaviour therapy, so that this may cater to all needs felt by these patients[4].
Different types of exercises are being used for the treatment of FM, including aerobic exercises, resisted treatment, flexibility exercises, and body conscience therapy[4].
Compared with other types of exercise, aerobic exercise has shown a more positive effect on the people's QoL, showing a soothing of pain and depression, lessening of anxiety, and improvement in mental state and physical function. A study has shown that body movement, with low-impact exercise, associated with perception, has brought benefits regarding the perception of the body, improvement of pain, and relaxation, thus being able to reduce the number of painful points and muscular contractions[7].
According to the European League Against Rheumatism (EULAR), in one of their reviews, aerobic exercise has been associated with general improvement in pain and physical function, among patients with FM. There is strong evidence that aerobic exercise is, indeed, the gold standard for treatment of this disease[8].
Physical activity can be defined as any body movement carried out by the muscles, generating an increase in energy consumption. Exercise is a physical activity that takes place in a repetitive, programmed and prepared manner; hence, dancing can be considered a type of physical exercise[7].
Dancing is a captivating and pleasant form of physical activity that gets even more attractive and dynamic when performed as a group activity. This is due to the joint execution of movements, as well as the exchange of ties and experiences. In addition, it brings greater motivation for physical exercise, as well as boosting attention and cognitive abilities, due to an increase in neural connections and blood flow. Last but not least, it has a positive effect on mood[6].
On top of this, it contributes to the physical training of balance, co-ordination, strength, flexibility, aerobic capacity and proprioception. Dancing also gives stimulation to one's listening, sight, general sensorial capacities, and learning of motor skills, all of this within one learning environment that encourages plasticity. Studies have suggested that dancing can alleviate the symptoms of FM[6].
One kind of dancing that has been growing and gaining ground these days is Zumba, currently practiced in over 120 countries around the globe. Zumba is a type of dancing inspired by Latin American music and dancing, bringing a few other types of dancing such as *salsa, samba, merengue,* and *reggeaton,* among others. There is the execution of basic aerobic movements, with sets of steps from belly dancing, *hip-hop,* and others[9].
People who practice zumba get involved with the rhythms, the movements, and choreographies, all of which are easy to learn. There is no idea of right or wrong; each individual dance at his or her own pace and rhythm, getting carried away by the sound of the music itself. This means there is no need for any specific skills to be able to dance the zumba[10]. This rhythm establishes a link between the core principles behind aerobic physical training and general strengthening, thus bringing an increase in energy consumption and promoting improvements to posture, and to the cardiovascular system, as well as strengthening of bones and muscles and improvement to physical aptitude[9].
The purpose of this study was to present reports on the experience of patients with FM who practised Zumba dancing for three consecutive months in 2016 and had to suspend the dancing activities for three months due to the academic recess between the end of 2016 and the beginning of 2017.

CASE REPORTS

This is a qualitative study on 16 female subjects with FM who participated in zumba dancing for three consecutive months in the second half of 2016. The reports were collected when activities resumed, in March 2017, meaning that the patients went three months without this intervention, during academic recess.
The study was carried out at the Clinic of the School of Physiotherapy at the Health Sciences University of Trairi (FACISA) of the Federal University of Rio Grande do Norte (UFRN), in the city of Santa Cruz, in the interior of the state of Rio Grande do Norte, Brazil.
This study came about as a result of the further activities project "*Zumbafibro: dancing and art in the promotion of health among women with fibromyalgia*", held in 2016 at FACISA/UFRN and renewed for 2017, based on the need to speed up service in the light of the high demand from patients with FM who were on the waiting list at the Clinic of the School of Physiotherapy at this same institution.
The patients included in the Project had had a medical referral and a diagnostic hypothesis of FM and were subjected to two sessions of Zumba dancing per week for a period of three months, during the second half of 2016. A student who was duly qualified in this specific area gave these sessions, which took place in a spacious room with air conditioning.
Some groups of patients were excluded from the study. These included patients with uncontrolled hypertension; patients with uncontrolled cardiorespiratory disease; those with a history of syncope or arrhythmia caused by physical exercise; those with uncontrolled diabetes; patients with serious psychiatric problems; those who took regular physical exercise (at least twice a week) over the last 6 months; any other conditions that would make it impossible for the patient to take physical exercise; those with travel planned for the next 12 months.
This study was approved by the Research Ethics Committee of the Health Sciences University of Trairi, by statement No. 1,933,939, as according to the terms of Resolution No. 466/2012 of the National Health Council. All patients have duly read and signed the Free and Informed Consent Form (FICT).
Table 1 shows the social and demographic characteristics of the patients.

Table 1. Characteristics of the patients on initial evaluation

Variables	Mean
Age (years)	51.5
Time diagnosed with the disease (years)	5
Body mass index (kg/m^2)	27.82

When the activities of the Project started again in March 2017, the 16 women with FM answered three questions. The purpose

here was to look into how they felt having been without Zumba dancing for three months. Table 2 presents the results obtained. The first question was asked in order to understand how the patients felt during the long time they spent without zumba.
The second question was to understand the real meaning and importance of zumba dancing for the patients (Table 3).
The purpose of question 3 was to discover the patients' opinions about what aspects of the disease were improved by zumba dancing (Table 4).

Table 2. How did you feel over the three months of recess, without practicing zumba dancing?

"I felt terrible, with a lot of tension and pain"
"Very tired, with a lot of pain"
"I felt awful"
"I felt awful, with a lot of pain"
"Full of pain, and missing my Zumba dancing"
"I didn't feel at all well; I had fits of intense pain"
"Terrible, a lot of pain"
"I missed my dancing and had a lot of pain. I got worse"
"I felt a bit of pain"
"I felt a lot of pain, and lost motivation"
"I felt really bad"
"I felt a lot of pain without Zumba"
"I felt awful. I am unable to pay for private dance sessions"
"I felt terrible, without doing my exercises"

Patients' answers to question 1.

Table 3. How important is zumba dancing for you?

"Important, as it improves my quality of life"
"I think it is important, it makes me feel good"
"Important, it boosts my self-esteem"
"Very important, it helps me relax"
"Very important. I feel happy"
"Very important for me to socialise and make new friends"
"Very important; I just love zumba"
"I feel better with zumba. I relax"
"It is everything"
"Just great. I love it"
"It soothes my pain. I feel lighter"
"I feel great"
"I feel more courageous and with more self-esteem"
"Very important. I like it, and it makes me feel great"
"It is great, and helps to soothe the pains"
"It is important, as it helps a lot and makes me feel lighter"

Patients' answers to question 2.

Table 4. What do you think improved after zumba?

"The pains improved, and I sleep better"
"The pains improved"
"Reduction in pain, and improvement in self-esteem"
"My sleep improved, I have more energy, and it also helped to reduce my blood pressure"
"Improvement in physical performance, energy, sleep, and pains"
"The pains reduced, and now I have more energy and walk better"
"I sleep well, and pain is alleviated"
"I have more strength and energy to do my daily tasks, and I sleep well."
"I feel more energetic. Pains reduced, and my self-esteem has improved"
"Pain has improved. I feel my joints are less stiff, and I also feel less tired"
"I feel more stimulated"
"Improved self-esteem and reduction of pain"
"I lost weight, and the pain was reduced"
"It relieves pain. I have improved tremendously"
"The pain in my bones was reduced"
"The pain and my sleep improved"

Patients' answers to question 3.

DISCUSSION

As can be seen in the patients' reports, zumba dancing has a positive and direct influence on each patient's life, covering several different aspects of improvements to pain, QoL, and functionalities.
Regarding the first question, which addresses how they felt in the three months of recess without practicing zumba, they said they missed the dancing, felt worse without dancing, felt more tired. They also mentioned that pain increased substantially, that they felt tenser, and that self-esteem was also affected.
Specialised literature shows that the aerobic exercises carried out as a group activity not only lead to an improvement in physical function but also favour an emotional improvement among the patients, as there are neuroendocrine changes such as an increase in serotonin, which leads to a better mood[11]. In addition, group activities boost patient participation, as there is the establishment of ties of affection; in addition, there is sharing of experiences concerning the disease; thus, the activity becomes more dynamic. A study conducted on patients with FM to assess the effects of a programme of supervised physical conditioning, like a gym, showed that there was an increase in general functional capacity, together with an improvement in pain and to the general QoL of the participants[11].
In the second question of the study, which addresses the importance of zumba dancing for the patients, the answers reported clearly show that zumba is extremely relevant for the QoL of these people. With zumba dancing, they feel better, more relaxed, with better self-esteem; they also feel more courageous and feel pain relief.

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Specialised literature confirms these results, showing that some studies that have carried out aerobic exercise on the ground confirmed that the patients have shown antidepressant effects, as well as greater relaxation and removal of the pain at the painful points[12].

With regard to the third and final question, we can see that zumba has been effective, through the improvements reported, in several different aspects of the patients' lives. The main focus has been pain relief, but there has also been an improvement in areas such as quality of sleep, self-esteem, and physical performance. They also reported that they were much more energetic when practicing zumba dancing. One study shows that exercises, when performed on a regular basis, bring a general feeling of well-being, which results in a reduction in feeling some of the symptoms of FM, also hiking the QoL of these patients[13].

Lack of physical activity leads patients with FM to a general state of functional decline, with reduction of muscle resistance and cardiorespiratory function. These factors change functional performance, harming the execution of routine daily tasks (RDT)[11].

The physical exercise most commonly recommended nowadays, and which has had highly satisfactory results, is aerobics, which produces beneficial effects such as reduction of pain, improvement of sleep, improvement of general mood and cognition, and general improvement to well-being[11].

A plan of appropriate physical exercises, performed on a regular basis, improves motor co-ordination and also other physical abilities that are essential for the execution of RDT by people with FM[14]. With physical exercise, some substances are released to the brain, including endorphin, which is an important neuro-hormone which has an analgesic effect and acts upon modulation of pain, mood, anxiety, and depression. In addition, it relieves pain and provides a pleasant feeling[13].

The American College of Sports Medicine (ACSM) stresses that the ideal dose of physical exercise for patients with FM is still unknown; however, in general, the recommendation is that aerobic exercise should be taken three times per week for acquisition of a positive result with the improvement of symptoms[13].

Apart from these activities, other therapies are also very important. These include stretching exercises and exercises for the muscles. Stretching exercises have a positive effect on FM, generating improvement to sleep and morning stiffness[14]. Authors conclude that resistance training improves multidimensional functions, as well as easing pain and boosting muscular strength in women with FM; however, the evidence is still limited due to the small number of studies carried out on the performance of resisted exercise by patients with FM[15].

A study carried out with 80 women with FM who took belly-dancing lessons showed encouraging results, with improvement in pain, sleep, functional capacity, and the patients' self-image. In addition, this being a form of therapy based more on play, there was an improvement in QoL and greater patient participation[7].

It is believed that physical exercise must be prescribed based on the individuality of each patient and be programmed so that positive results may be obtained. It is important to remember that the best type of exercise is the one in which the patient feels greater pleasure and reduction of symptoms, both during the physical exercise and after it[14].

CONCLUSION

Dancing zumba as a type of intervention, carried out over three months, produced positive effects in improvement of pain, functional capacity and QoL, according to reports by women with FM. The study showed some limitations, such as a small sample size and the absence of a control group, even though the choice made was to produce just one report on the experience by the patients who participated in the further activity project.

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