

DOI: <https://doi.org/10.36489/saudecoletiva.2021v11i68p7397-7406>

Physical exercise as a therapeutic resource in treating depression

El ejercicio físico como recurso terapéutico para el tratamiento de la depresión

O exercício físico como recurso terapêutico no tratamento da depressão

ABSTRACT

Objective: To analyze the perception of Physical Education professionals regarding the impacts of physical exercises in the treatment of depression. **Methods:** This is an exploratory field research with a qualitative approach. The research scenario was composed by the Psychosocial Care Centers of a municipality in Ceará and the participants were Physical Education professionals, working in these services. The data collection technique was the structured interview. The interviews were recorded and later transcribed for analysis. **Results:** Service users have positive and significant impacts with the practice of physical exercises. The physical exercises performed are predominantly aerobic and collective, accompanied by music. Participants are evaluated before, during and after the interventions, with the information recorded in the medical records. **Conclusion:** Physical exercises are good resources in the treatment of depression, providing the user with numerous benefits, including mood stabilization and anxiety reduction.

DESCRIPTORS: Depression; Physical Exercise; Mental Health; Public Health.

RESUMEN

Objetivo: Analizar la percepción de los profesionales de la Educación Física sobre los impactos de los ejercicios físicos en el tratamiento de la depresión. **Métodos:** Se trata de una investigación de campo exploratoria con enfoque cualitativo. El escenario de investigación estuvo compuesto por los Centros de Atención Psicosocial de una ciudad de Ceará y los participantes fueron profesionales de la Educación Física, que laboran en estos servicios. La técnica de recolección de datos fue la entrevista estructurada. Las entrevistas fueron grabadas y luego transcritas para su análisis. **Resultados:** Los usuarios del servicio tienen impactos positivos y significativos con la práctica de ejercicios físicos. Los ejercicios físicos que se realizan son predominantemente aeróbicos y colectivos, acompañados de música. Los participantes son evaluados antes, durante y después de las intervenciones, con la información registrada en la historia clínica. **Conclusión:** Los ejercicios físicos son un buen recurso en el tratamiento de la depresión, aportando al usuario numerosos beneficios, entre ellos, la estabilización del estado de ánimo y la reducción de la ansiedad.

DESCRIPTORES: Depresión; Ejercicio Físico; Salud Mental; Salud Pública.

RESUMO

Objetivo: Analisar a percepção dos profissionais de Educação Física quanto aos impactos dos exercícios físicos no tratamento da depressão. **Métodos:** Trata-se de uma pesquisa de campo, exploratória, com abordagem qualitativa. O cenário da pesquisa foi composto pelos Centros de Atenção Psicossocial de um município do Ceará e os participantes foram os profissionais de Educação Física, atuantes nestes serviços. A técnica de coleta de dados foi a entrevista estruturada. As entrevistas foram gravadas e posteriormente transcritas para análise. **Resultados:** Os usuários do serviço têm impactos positivos e significativos com a prática de exercícios físicos. Os exercícios físicos realizados são predominantemente aeróbicos e coletivos, acompanhados de música. Os participantes são avaliados antes, durante e após as intervenções, sendo as informações registradas nos prontuários. **Conclusão:** Exercícios físicos são bons recursos no tratamento da depressão, proporcionando ao usuário inúmeros benefícios, dentre eles, estabilização de humor e redução da ansiedade.

DESCRIPTORIOS: Depressão; Exercício Físico; Saúde Mental; Saúde Pública.

RECEIVED ON: 03/23/2021 APPROVED ON: 04/08/2021

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INTRODUCTION

Depression can be conceptualized as a disease, characterized by a significant affective disorder, minimizing the level of self-esteem, lowering the mood, and it can last for weeks, months or consecutive years. ⁽¹⁾ According to the Pan American Health Organization (PAHO), depression is a mental disorder that can affect anyone, in which constant sadness, lack of interest in pleasurable activities and inability to perform daily tasks are the main features. ⁽²⁾

Symptoms of depression can be represented by sadness, loss of appetite and interest in various activities, sleep disorders, fatigue, guilt, lack of concentration. ⁽³⁾ In addition to indecision, restlessness, willingness to harm yourself and in more serious cases, suicide. ⁽²⁾

Depression is estimated to affect more than 300 million individuals of all ages worldwide, contributing significantly to the global burden of disease. ⁽⁴⁾ In Brazil, the 2019 National Health Survey (PNS) indica-

tes that 10.2% of the population, which is, approximately 16,3 million people over 18 years of age, was diagnosed with depression by a mental health professional. ⁽⁵⁾

Among the treatment possibilities for depression, physical exercises stand out, which have been used in Psychosocial Care Centers (CAPS - Centros de Atenção Psicossocial) as an alternative to minimize the symptoms of this illness. Thus, it emphasizes the insertion of the Physical Education professional in the context of collective mental health, especially through Multidisciplinary Residencies in Health, guided by the principles and guidelines of the Unified Health System (SUS), based on the socio-epidemiological needs of the population.

The objective of the Physical Education professional in these scenarios is to develop practical activities and physical exercises that contribute to enhancing mental health care, encouraging the promotion, protection and recovery of health through movement and body expression.

In view of the above, the following starting question was elaborated, of an

investigative nature: what is the perception of Physical Education Professionals regarding the impacts of physical exercises in the treatment of depression? Therefore, this research aims to analyze the perception of Physical Education professionals regarding the impacts of physical exercise in the treatment of depression.

DEPRESSION AND PHYSICAL EXERCISE

Depression is a mental disorder resulting from an internal conflict and a biochemical change. This internal conflict can be triggered by several factors: psychic, organic and social. The intensity of the internal conflict and its durability will determine the severity of this disorder. ⁽⁶⁾

This disease activates regions in the brain that produce sadness. People with depression have decreased brain activity, more specifically, the prefrontal cortex on the left side, decreasing the stimulus for positive feelings. ⁽⁷⁾

O Sistema Nervoso em consonância com o Sistema Endócrino é responsável

pela maioria das funções do organismo. As principais células que compõem esse sistema são denominadas neurônios. As substâncias químicas sintetizadas e liberadas por esses neurônios são chamados de neurotransmissores. Fisiologicamente falando, os principais neurotransmissores são a serotonina (5-HT), a Noradrenalina ou Norepinefrina (NE) e a Dopamina (DA), que, dentre outras funções, influenciam nas emoções e no estado de humor dos indivíduos, assim como a endorfina. A maioria dos casos de depressão apresenta uma diminuição dessas substâncias nas transmissões sinápticas, que pode ser entendida como propagação dos impulsos nervosos de uma célula nervosa para outra.⁽⁶⁾

Brain serotonin levels are related to changes in behavior, mood, anxiety, aggression, depression, sleep, fatigue, appetite suppression and others.⁽⁸⁾ Thus, depression is caused by a failure in the neurotransmitters responsible for the sensation of pleasure, such as serotonin and endorphin, the latter also acts as a natural tranquilizer in the body and relieves the sensation of pain.

Depression is caused by a neurochemical problem, originated from the reduction of serotonin and norepinephrine, produced in the Central Nervous System, by neuronal cells. Evidence indicates that the reduction of these two substances causes depression.⁽⁹⁾

Physical exercise induces an increase in the production of dopamine and norepinephrine and other neuropeptides (chemical substances produced and released by brain cells and certain other cells), such as endorphins, providing a feeling of well-being to the practitioner.⁽¹⁰⁾

Physical exercise is understood as a planned, structured, repetitive physical activity, which aims to develop physical fitness and motor skills, in addition to organic-functional rehabilitation.⁽¹¹⁾ In this context, the regular practice of physical exercise plays a fundamental role in the normal functioning of the body, providing health and quality of life, for this reason,

adequate levels of physical fitness must be maintained throughout life.⁽¹²⁾

Exercises can be classified into aerobic and anaerobic. Aerobic exercise is one that uses oxygen to generate muscle energy, being continuous, long-lasting and of low to moderate intensity.⁽¹³⁾ Examples are: walking, running, dancing, swimming, water aerobics, spinning, step, trampoline and others.

Anaerobic exercise, on the other hand, is one that is performed in short periods of time and at high intensities, does not require a continuous supply of oxygen to obtain energy, it is performed interspersed, as it requires a lot of physical effort.⁽¹³⁾ A good example of this type of exercise is weight training.

Physical exercise provides joy, a state of euphoria and progresses according to the duration of the exercise, also resulting in pain tolerance, appetite control, reduced anxiety, tension, anger and confusion, due to the secretion of endorphins in the body.⁽¹⁴⁾ Regular physical exercise can reduce the patient's state of anxiety and stress, minimize mild to moderate depression, help severe depression, improve mood, self-esteem and self-image.⁽¹⁴⁾

METHODS

This is an exploratory field research with a qualitative approach. The research scenario consisted of Psychosocial Care Centers (general and alcohol and other drugs) in a municipality in Ceará. The sample consisted of two Physical Education professionals, the only ones linked to the service through a Multiprofessional Residency in Health.

The data collection technique was the structured interview, carried out in November 2013. The interview is a procedure used in social investigation, for data collection or to identify, assist or solve a social problem.⁽¹⁵⁾

The collection instrument was an interview script containing four questions, namely: 1. What is your perception about the impacts of physical exercise in the treatment of patients with depression in-

cluded in the physical exercise program? 2. What type of physical exercise (aerobic or anaerobic) is applied to patients diagnosed with depression? 3. What are the strategies to motivate participants to practice physical exercises? 4. How is the evaluation of the evolution of patients with depression included in physical exercise programs carried out?

The interviews were recorded and the interviewees' speeches were transcribed for data analysis. This was carried out through content analysis, comprising three processes, namely: pre-analysis (reading and contact with field material); exploration of the material (textual reduction to meaningful expressions); and treatment of results (relationship between the data that emerged in the research and what is found in the scientific literature).⁽¹⁶⁾

Aiming to ensure anonymity in the research, participants were identified and referenced in this study, randomly, through numbers. Each research participant signed an Informed Consent Form (ICF), in order to inform about the benefits of the research, procedures used, objectives, among others.

The researcher's access to organizations for data collection was allowed with the authorization of those responsible by signing the Term of Consent. The study, in its ethical procedures, was referenced by Resolution No. 466/12 of the National Health Council (CNS), which refers to research with human beings.⁽¹⁷⁾

RESULTS AND DISCUSSION

The first question in the interview was about the impacts of physical exercise on the treatment of patients with depression included in the physical exercise program. The results show that exercise improves quality of life, minimizes drug therapy, reduces anxiety and stabilizes mood, among others, as can be seen in the statements below.

"Physical exercise provides an improvement in quality of life, as it enables the feeling of well-being, also provides pos-

sible reductions in the consumption of medications, improvement in self-esteem and self-image, and more willingness for other daily activities" (Physical Education Professional 1). "There are many reports of patients who managed to stabilize mood and reduce anxiety after being inserted in body practice workshops, in addition, it is possible to see greater socialization among users and among them with the professional team" (Physical Education Professional 2).

Corroborating the aforementioned results, a case study with a depressive patient in a psychiatric hospital is pointed out. Over a period of three months, the patient underwent an exercise program. At the end, there were improvements in terms of patient participation in hospital activities and a decline in depressive symptoms.⁽¹⁸⁾

Psychiatrists and Physical Education teachers state that there is a beneficial effect of physical exercise on body image, psychological positivity, tension reduction and social interaction of depressed patients. And that there is also a significant effect on the mood and feeling of self-efficacy for performing daily tasks.⁽¹⁹⁾

In addition to improving physical fitness, increasing strength, coordination and balance, physical exercise helps to reduce functional disability and negative thoughts and enhance well-being and mood.⁽²⁰⁾

The speeches presented are also confirmed by an intervention, characterized by hydrogymnastic classes, twice a week, for a year. A group of nine women was submitted to physical exercise, while another group (control) of nine women did not participate in such activities. The study found a considerable difference in the symptoms of depression between the groups, concluding that the practice of exercises contributes to the patient's improvement, when combined with conventional treatment.⁽²¹⁾

It is also highlighted that physical exercise is a possibility of antidepressant treatment, which provides the individual with greater social interaction, reduced

functional disability and greater physical conditioning, which results in better quality of life.⁽²²⁾

The second question addressed the type of exercise (aerobic or anaerobic) proposed to patients diagnosed with depression. The results obtained did not point to the physiological factor, but to the lack of equipment and materials to carry out the activities, as can be seen in the interviewees' statements.

The last question was about the evaluation of the evolution of patients with depression inserted in physical exercise programs.

"Physical activity at CAPS is new. We are starting with aerobic group activities such as water aerobics, gymnastics, guided walking, in addition to stretching and flexibility exercises, due to the lack of material" (Physical Education Professional 1). "The exercises are essentially aerobic, due to the equipment available for carrying out the activities" (Physical Education Professional 2).

It should be noted that anaerobic and aerobic exercises are indicated without any restrictions, working as an aid in the treatment and prevention of depression.⁽⁹⁾ The greatest benefits unleashed on the brain and on cognitive and mental functions seem to be provided by aerobic exercise.⁽²³⁾

The third question sought to verify strategies to motivate participants to practice physical exercises. The results show music as a possibility for optimizing in-

terventions, as well as group activities to ensure socialization.

"The activities are always carried out in groups, using music, usually selected by the members of the group, the euphoria when listening to the chosen songs is noticeable" (Physical Education Professional 1). "I try to use music that users like, to make the class more attractive, they talk about the possibilities of rhythms, which is interesting for therapy, which also aims at socialization" (Physical Education Professional 2).

Physical exercise performed with music interferes in the mood of its practitioners in a positive way, reducing sadness and fear, making them more active.⁽²⁴⁾ Music provides psychological benefits, increasing motivation and making the activity more enjoyable.⁽²⁵⁾

The last question was about the evaluation of the evolution of patients with depression inserted in physical exercise programs. The results show that Physical Education professionals seek to assess users before, during and after interventions.

"The user's assessment is carried out before, during and after the practice of physical exercises, it is observed how they were when they arrived, their engagement in activities and how it was after the intervention, all of which is recorded in the medical record" (Physical Education Professional 1). "After each activity, a brief summary of what was experienced and recorded in the patient's medical record is made, providing the rest of the team with information on how the activities are being carried out and how the user is in relation to the therapy. I also seek to know how they are feeling about the activities, in order to correct possible methodological flaws and maximize successes" (Physical Education Professional 2).

The assessment adopted by the interviewees was considered to be of the formative type. The formative assessment aims to harmonize information about the process development, on an ongoing basis. Its functions are to guide, support, reinforce

and correct, ⁽²⁶⁾ which is essential for the care given to the individual.

CONCLUSION

According to Physical Education professionals, the main impacts of physical exercise in the treatment of users diagnosed with depression are: improved quality of life; possible reductions in drug consumption; mood stabilization; anxiety reduction; improvement in self-esteem and

self-image; greater socialization; greater willingness for diverse everyday tasks.

The main strategies used by Physical Education professionals to motivate users in the practice of physical exercises are the use of music, in order to make the experience more pleasant and less exhausting, and group activities to ensure socialization.

The evaluation of the evolution of patients undergoing physical exercise occurs before, during and after the practice, being

recorded in the medical record by the aforementioned professionals. The exercises included in the treatment of CAPS users are predominantly aerobic.

This study does not end the discussion about the theme, considering that it addressed the reality of a specific location. Thus, it is suggested that other regions in which Physical Education professionals were included in the CAPS should be studied in order to obtain new perspectives. ■

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