

Physiotherapy for headaches: current situation and challenges in Brazil

Fisioterapia nas cefaleias: atualidades e desafios no Brasil

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Since millennia before Christ there are records about headaches, which was once related to magic or religion, until it reached medical and scientific knowledge^{1,2}. Currently, the worldwide prevalence of active headaches reaches 52%, representing a common and almost universal human complaint throughout history³. Headaches, according to the International Classification of Headache Disorders, correspond to a group of disorders that affect the head region, with more than 200 categorized types, which can belong to three distinct groups: primary headaches, secondary headaches and the group that includes painful cranial neuropathies, other facial pains and other headaches⁴.

In ancient times, there was belief that headaches were caused by evil spirits that took over the bodies, so the treatment used initially consisted of trepanning the skulls, so that these spirits would leave the body². With the advent of technology, and also human evolution, the treatments have been adapted. Nowadays, there are pharmacological and non-pharmacological treatment options for headaches⁴.

There are several kinds of pharmacologic options, the choice of which depends on the type of headache, its clinical presentation, the presence or absence of comorbidities, the individual's preferences, and the expertise of the professional who is accompanying the patient. Some of the pharmacological options cited in studies are: changes in lifestyle, physical exercise, mindfulness, cognitive-behavioral therapy and/or other psychotherapeutic interventions and physical therapy modalities⁵⁻⁷. In general, for headache treatments, especially chronic ones, the involvement of multiprofessional teams (doctors, dentists, physical therapists, psychologists, physical education professionals, nutritionists, among others)⁶ is recommended.

Specifically regarding the work of physiotherapists in Brazil, there is still no common denomination of specialty recognized by the *Conselho Federal de Fisioterapia e Terapia Ocupacional* (Federal Council of Physiotherapy and Occupational Therapy) for physiotherapists who work in this area of head and neck disorders, as some call it. Others use the terms buccomaxillofacial, craniocervicomandibular and/or craniomandibular. Although this specialty is not yet recognized, studies have already pointed out evidence of several physiotherapeutic approaches as beneficial in specific types of headaches, especially in cases of cervicogenic headache (the most prevalent secondary headache), tension headache, and migraines (the most prevalent primary headache)⁷⁻¹⁰. The great objective of most individuals is to get rid of the headache. However, sometimes, and thinking mainly about primary headaches, it is not possible to guarantee that the headache will disappear, but only that periods of remission can exist. Therefore, the goal of physical therapists working in this area should be to reduce the frequency, intensity, and duration of pain, as well as to prevent crisis, reduce disability and the impact caused by headaches.

Considering the magnitude of the history of headaches, each physiotherapeutic intervention can be indicated or not if taken into consideration the physiopathological mechanisms of the headaches and the pain mechanisms involved in their genesis and, sometimes, the maintenance response of the clinical condition, and a good clinical reasoning by physiotherapists is essential^{5,7}. A decisive point in the choice of strategies by the physical therapists is to comprehend that, besides tissue involvement, in which the approaches are based on the application of hand techniques (hands-ON), it is also necessary to incorporate treatment strategies aimed at desensitizing the central nervous system, which involves intervention options with effects from the central nervous system to peripheral body regions (hands-OFF)⁵.

Currently, the gold standard of treatment for chronic pain conditions, including headaches, is physical exercise¹¹. However, one of the great challenges found is the low adherence of individuals to exercise programs, usually attributed to a sedentary lifestyle, fear of performing movements when in pain, and low level of personal motivation to perform these programs. Thus, and not less important, most of the time it is necessary for the individual to adapt to movement-based interventions, which can be done through gradual exposure to the exercise program and pain education, and the patient's preference must be considered when planning therapeutic exercises¹¹.

Therefore, initially, one of the functions of the physical therapist is to educate the individual about their condition. Individuals need to be the protagonists of their treatment and education aims to increase their knowledge about their health condition, the treatment options, the risks of excessive use of medication, how lifestyle interferes in the onset of crises, the importance of self-care and, in some cases, it is necessary to demystify limiting beliefs^{12,13}.

These education programs can be carried out individually or in groups, and their delivery formats are diverse, such as dialogues, pamphlets, booklets, e-books, and/or videos. There is still no consensus in the literature about the best way to carry out these education strategies; the major recommendation is that they should be carried out by a qualified professional and that

they should allow the individual's adherence. In addition, it is worth noting that these pain education strategies should not be used in isolation; recommendations suggest that they should be associated with exercises, behavioral and/or pharmacological treatments^{5,6}.

It is noteworthy that central and peripheral neuromodulation techniques for the treatment of headaches are being studied recently, mainly aiming at neural desensitization in the treatment of these conditions¹⁴. In physiotherapy, a widely studied option that can be used is the analgesic electrostimulation, such as the transcutaneous electrical nerve stimulation (TENS). Studies show that TENS can help reduce mechanical hyperalgesia, allodynia, pain intensity both at rest and during movement, fatigue, kinesiphobia, and restore the endogenous mechanisms of temporal summation and conditioned pain modulation¹⁵.

Aiming at this analgesic effect and improvement of musculoskeletal functioning, another option available for the physical therapist to use are manual therapy techniques, which encompass spinal manipulation and/or mobilization, soft tissue release, massage therapy, and other manipulative and body-based therapies¹⁶, which should preferably be used in combination with other strategies^{5,7,9}. These approaches should be used according to the findings in the evaluation and aim to reduce active trigger points, promote muscle length improvement, reduce muscle tension, improve mobility of the cervical and thoracic spine, and address deficits in the temporomandibular joint and associated structures⁶.


Therefore, one of the great challenges is to comprehend that not all headaches are the same, and that physical therapists cannot treat all people the same way. Headaches are complex, vast, and have several diagnostic and pathophysiological peculiarities. Therefore, physical therapists who choose this area of work must consider aspects of modern neuroscience of pain and musculoskeletal issues in their approaches, that is, there needs to be coherence with the use of multimodal approaches, besides exploring a broad objective and subjective assessment^{5,7}.

Another point that needs attention is the fragility of pain curriculums in undergraduate programs in physical therapy courses in Brazil. Only 6% of the available curriculums had a specific course on pain, exposing a problem in the study of pain in the physical therapy curriculums in Brazil¹⁷. Furthermore, since this field of action is still not widespread in physical therapy undergraduate courses, most of the time, physical therapists need specific courses and specializations to be able to evaluate and treat individuals with headaches.

Finally, it is important to emphasize that, although there are still great gaps in the comprehension of headaches, therapists have much to contribute to the treatment of these individuals, promoting symptom relief and improvement of functionality, besides positively impacting quality of life. However, it is up to us to constantly and effectively update the area, and not let ourselves succumb to our own biases when choosing our physical therapy approaches.


Josimari Melo DeSantana

*Federal University of Sergipe. Physiotherapy Department,
Post-Graduate Program in Health Sciences and Post-Graduate Program in Physiological Sciences.
São Cristóvão, SE, Brazil.*

 <https://orcid.org/0000-0003-1432-0737>
E-mail: josimelo@academico.ufs.br

Maria Ivone Oliveira Dantas

*Federal University of Sergipe, Post-Graduate
Program in Physiological Sciences.
São Cristóvão, SE, Brazil.*

 <https://orcid.org/0000-0003-0588-4901>
E-mail: ivoneoliveiradantas@gmail.com

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