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Discussion and conclusions: Training in mental health during bachelor is insufficient and coincident with the information provided by the coordinators of the 19 physiotherapy degrees in Portugal. The recommendations collected in the questionnaire, highlight the main aspects that should be addressed within the mental health theme in the basic training of physiotherapists. Moreover, the physiotherapists working in the field report urgent needs of formation.

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Psychosocial aspects in temporomandibular disorder: clinical case report

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ABSTRACT

Introduction: Temporomandibular disorders have a considerable prevalence, with a significant impact on physical and psychosocial factors [1]. It contributes to high socioeconomic costs, which are generally associated with comorbidities such as depression and other psychological factors [2,3]. The Diagnostic Criteria for Temporomandibular Disorders is based on a bi-mechanical model of pain with two axes: physical signs and symptoms (axis I) and psychological factors (axis II). Psychological factors such as catastrophizing pain, psychic distress, guiding beliefs, beliefs related to painful perception, depressed or anxious mood, and passive coping are all related to an increased pain perception, increased levels of disability, in patients with chronic pain with temporomandibular disorders [3,5]. Psychosocial factors were also identified as predictors of treatment outcome in patients with temporomandibular disorders [6]. We consider that somatic awareness is an important sensory-discriminative factor to be taken into account in this group of patients. The aim of this case study is to analyse if the identification of psychosocial aspects contributes in controlling the temporomandibular symptoms.

Material and methods: A case study of a 25-year-old female patient with generalised headache, generalised myofascial pain (III) in the head and neck region, self-reported awake and sleep bruxism and important psychological factors related to catastrophic pain and anxiety, all described during the initial interview. The patient can positively correlate beginning of the manifestation of the painful symptoms with relevant psychosocial and drastic, in her own words, family changes. Pain intensity and headache are measured with numeric pain rating scale (NPRS) and the patient is submitted to one session of physical therapy per week. The treatment plan consisted of cognitive-behavioral therapy with a first appointment based on education, habits recognition and modification, the patient was medicated with muscle relaxants and off label gabapentine, physiotherapy and psychotherapy. All the assumptions of the Helsinki Declaration have been fulfilled and an informed consent for clinical case of Clínica Dentária Egas Moniz approved by the ethic commission of Instituto Universitário Egas Moniz.

Results: Three months after (12 sessions of physical therapy) the beginning of the treatment plan, the biggest breakthrough was the ability of the patient to identify psychological situations that trigger the exacerbation of pain. The patient referred absence of headache, a significant reduction of myofascial pain (I) located in the masseter and in the temporal of about 70% of the pain scale and changed from myofascial pain to local myalgia.

Discussion and conclusion: Psychosocial factors are frequently present in patients with temporomandibular disorders and their evaluation, grading and consequent intervention become important for the prognosis and resolution of the case. The assessment of psychosocial aspects should be considered in all patients with temporomandibular disorders in order to analyse, case by case, whether they are relevant for controlling their symptoms. It will be important to carry out an experimental study with a larger sample to verify whether the obtained results point in the same direction.

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Relationship between handedness and the incidence of spinal changes in the frontal plane: evaluation using Idiag® Spinal Mouse®

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ABSTRACT

Introduction: In middle and high school, where classroom furniture and equipment are developed mainly for right-handed children, left-handed children may find specific obstacles that can lead to postural changes in the future [1]. The purpose of this study is to determine whether there is an association between handedness and the incidence of spinal changes in the frontal anatomical plane, in a sample of students aged between 10 and 18 years old from public middle schools in Amares, Braga, Portugal.

Material and methods: A cross-sectional study was carried out with 479 students, 246 (51.4%) females and 233 (48.6%) males, aged between 10 and 18 years old ($\bar{x} = 13.6$ years old, $\delta = 2.496$). An informed consent was signed through their educational representative, after which an individual inquiry has been given to each student, regarding their sociodemographic information, activities of their daily lives and clinical history. Measurements of weight and height were individually performed, simultaneously with a dynamic evaluation of the spine in the frontal anatomical plane using the non-invasive measuring instrument Idiag® Spinal Mouse®. All data were analysed using descriptive and inferential statistics, which were performed using the Chi-Square (χ^2) test for association. Significance levels (denoted as α) of 0.05 and 0.01 have been considered for the presence of statistically significant association between the considered variables.

Results: Of all participants in the study, 431 (89.98%) were right-handed and 48 (10.02%) left-handed. The presence of left convex scoliosis was identified in the vast majority of students, particularly in the lumbar region (478 students, 99.79%), irrespective of the handedness of the student. No statistically significant association was identified between handedness and the prevalence of spinal changes in the thoracic region ($\chi^2 = 1.355$; p -value = .508), lumbar region ($\chi^2 = 0.112$; p -value = .738) and sacral region ($\chi^2 = 2.590$, p -value = .274) of the frontal plane. However, 86% of the students presented thoracolumbar scoliosis in "C" with convexity to the left side and 10% presented thoracolumbar scoliosis in "S", that is, with two curves present. The limitations of this investigation were using a small sample from only one region of Portugal, not evaluating the cervical region (instrument limitation), having a small percentage of left-handed people and little time to carry out the study.

Discussion and Conclusion: Although there is no significant association between laterality and scoliosis, data supported by previous studies [1,2], we consider that an early diagnosis of postural changes prevents its progression and its future appearance. Scoliosis, due to unilateral mechanical forces, may destabilise the muscle-articular joint and favour the appearance of muscular and coordinative differences and the lack of a normal movement in one area, what will result in excessive movement in another causing mechanical overload in these structures, which are sensitive to pain. These results may encourage the development of new studies to identify the causes of scoliosis in students in this age group.

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