



## Relevance of Psychosocial Factors in Oral and Facial Pain and Headache

A major advance over the past 50 years in the pain field has been the widespread recognition of the multidimensionality of pain, including oral and facial pain states and headaches. The biopsychosocial and sociocultural features of pain have been extensively documented in the pain literature, and studies addressing models based on these features have emphasized the importance of so-called psychological or psychosocial factors—such as emotion, stress, anxiety, and mood—as risk factors in the development and/or maintenance of various pain conditions.<sup>1-4</sup> Furthermore, studies in animals as well as in humans have revealed the circuits in the brain underlying the influences of psychosocial factors and have identified several of the chemical mediators involved in their interactions with nociceptive circuits in the brain.<sup>1,3,4</sup>

Many studies have shown positive associations between psychosocial factors and orofacial pain conditions and headaches, with higher levels of stress, anxiety, depression, negative somatization, and catastrophizing in patients with these conditions.<sup>1,3,5,6</sup> The importance of these factors is emphasized by their inclusion as major components of diagnostic systems, such as the Research Diagnostic Criteria for Temporomandibular Disorders (TMD)<sup>7</sup> and their recent update, the Diagnostic Criteria for TMD.<sup>8</sup> While many of these association studies suggest that these comorbid psychosocial states may contribute to the onset or maintenance of pain and negatively influence the patient's quality of life (QoL) and well-being, causal links have not been clearly defined. That is to say: Do these factors increase the risk of developing oral or facial pain or headache, or are they a result of the pain because the patients have become stressed and depressed by their pain condition?

Although not directly focusing on cause-and-effect relationships, several papers in the present issue of this Journal have addressed the presence or role of psychosocial influences in pain patients. Kothari et al describe a new, simpler process of assessing psychosocial functioning in patients with TMD pain and also document that the great majority of these patients manifest one or more psychosocial parameters of distress or disability. In testing the validity of a new questionnaire for assessing QoL in migraine patients, Seo et al also show the importance of psychosocial factors in episodic and chronic migraine. Furthermore, Zucoloto et al show that psychosocial parameters are

evident in patients with a variety of orofacial pain conditions and that—along with behavioral factors—these may affect the patients' perceptions of their oral health. Since a patient's perception of his/her health has previously been shown to influence the patient's decision to seek health care and compliance with treatment, the findings of the study by Zucoloto et al have relevance to the oral health status and management of orofacial pain patients. In their study of predictors of clinical outcomes in adolescent TMD pain patients, Wahlund and Larsson document that the presence of symptoms related to anxiety, depression, and stress in this patient group had some predictive value, but were not consistent and were dependent on the type of outcome measure used and the time point at which the patients were assessed. Also of interest is their finding that gender may predict outcome, since boys in the study were more responsive to treatment than girls, which may be related to previous findings indicating that girls with TMD pain have more psychosocial vulnerability compared to boys. However, Sem et al report that gender, anxiety, and depression were not significantly associated with temporomandibular joint pain of patients with newly diagnosed rheumatoid arthritis, a finding they point out contrasts with that of an earlier study.

The foregoing findings reported in the present issue of the Journal underscore the complexity and variability of pain conditions and their association with psychosocial factors. While there may be disparities between studies in the applicability of these factors in some pain conditions and a cause-and-effect relationship is often not clear, there is nonetheless general agreement in the literature that psychosocial factors do influence pain and its management. Thus, psychosocial factors need to be taken into account by clinicians in the diagnosis and management of patients with oral or facial pain or headache, particularly when it is persistent, since they may represent risk factors contributing to the development and maintenance of the pain and negatively impact the treatment selected for the patients.

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## References

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