

## Cognitive, behavioral, and psychological profile in orofacial pain: the role of catastrophizing

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Abstract

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### Abstract

**Introduction:** Chronic orofacial pain (COFP) is one of the most common types of medical complaints with lower rates of treatment success<sup>1</sup>. Many studies documented the association between pain-related disability, emotional distress<sup>2,3</sup> and catastrophizing thoughts<sup>4,5</sup>. However, the neuropsychological features of COFP have not been characterized yet. Aim of this work was to investigate the cognitive, behavioral and personality profile of patients with COFP.

**Methods:** Twenty-four patients with COFP and 40 age-, education- and sex-matched healthy controls (HC) underwent comprehensive cognitive, behavioral, psychological, and personality assessment using validated questionnaires and tests. The intensity of pain at the time of assessment was also recorded. Between-group and correlation analyses were performed with non-parametric tests. The Benjamini-Hochberg correction for multiple comparisons was applied.

**Results:** Patients performed poorly in executive function tasks compared with HC. COFP showed psychopathological profiles characterized by mood disorder, alexithymia, somatization and worthlessness feelings. Personality assessment revealed higher frequency of schizoid and borderline personality traits, but none reached cut-off of clinical relevance. Compared to HC, the behavioral profile of COFP was qualified by feelings of loneliness, low quality of life, and lower levels of satisfaction in the interpersonal relations. Coping strategies were characterized by catastrophizing attitudes, with significant higher helplessness and rumination scores than HC. In COFP, catastrophizing was not associated with pain intensity nor cognitive performances, but with psychopathological and personality profiles. Dividing patients according to the occurrence of clinically relevant catastrophizing, we found that Catastrophizing COFP patients (C-COFP) had lower mental health, higher mood disorders, poorer social network, higher difficulties in describing feelings, and lower pain-acceptance scores than those without catastrophizing thoughts.

**Discussion:** In line with literature data on chronic pain, the cognitive-behavioral profile of COFP patients is characterized by dysexecutive profile, mood disorder and maladaptive coping strategies. Even though no overt personality disorder emerged, alexithymic traits, somatization and feelings of worthlessness were relevant in our cohort. Notably, catastrophizing thoughts were associated with poor mental health and impaired social functioning, warranting clinical attention for specific therapeutic strategies approaches.

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