



## Craniofacial and neck disability predict the presence of symptoms related to central sensitization in individuals with temporomandibular disorders

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### Background

Temporomandibular disorders (TMD) are the major cause of non-dental pain in the orofacial region. Patients with TMD frequently report craniofacial disability and pain in other areas of the body, like neck pain. However, there is still a gap regarding the relationship between the presence of symptoms related to Central Sensitization (CS) and craniofacial and neck disability in patients with TMD.

### Objective

To explore the relationship between the presence of symptoms related to CS, as measured by the CSI, and craniofacial and neck disability.

### Methods

This study was a cross-sectional study conducted with 87 individuals diagnosed with painful and mixed TMD. They were assessed for the presence of central sensitization symptoms using the Central Sensitization Inventory (CSI), craniofacial pain and disability using the Craniofacial Pain and Disability Inventory (CF-PDI), and neck disability using the Neck Disability Index (NDI). A Multiple Linear Regression was used to assess the relationship between craniofacial and neck disability and the presence of symptoms related to CS. Also, the association between the craniofacial disability domains and the presence of these symptoms was analyzed by multiple linear regression. In addition, the Chi-squared Test ( $P < 0.05$ ) was used to verify the association between CS-related symptoms and the level of neck disability. Finally, the Prevalence Ratio of CS symptoms about the level of neck disability was calculated.

### Results

The presence of CS-related symptoms is predicted by craniofacial disability and neck disability in 36%. In addition, the pain domain and the frequency of comorbidities domain of craniofacial disability can predict the presence of these symptoms in 30%. Finally, individuals with neck disability (moderate and severe disability) have 1.84 times more symptoms related to CS than individuals without neck disability (no disability and mild disability).

### Conclusion

The results of this study support that craniofacial disability and neck disability are predictors for the presence of symptoms related to CS. Furthermore, the pain domains and frequency of comorbidities domain of craniofacial disability are considered predictors of these symptoms. Finally, individuals with a neck disability have more symptoms related to CS than those without a neck disability.