

## The Role of Oxygen Desaturation in Temporomandibular **Disorder and Obstructive Sleep Apnea Interactions**



BACKGROUND Obstructive Sleep Apnea (OSA), is frequently observed in patients suffering from painful Temporomandibular Disorder (TMD). The Oxygen Desaturation Index (ODI), which quantifies the number of oxygen desaturations per hour of valid sleep, is an established metric for OSA detection.



To evaluate the ODI in patients with painful TMD and to explore its impact on sleep quality, pain characteristics, and psychological factors.



#### RESULTS

#### **Descriptive statistics for qualitative variables** (frequency)

		91%				9%
Fig 1. Gender				F	EM	MASC
69%				18%		13%
Fig 2. TMD Classific	ation	BOTH	GIA	L MAST DISOF	TICATORY RDERS	MUSCLE
12%		<b>62%</b>			26	%
Fig 3.Chronic Pain I	ntensity			1	2	
21%			79%			
Fig 4. Pain + 3 Mon	ths				NO	YE:
21%	4%		64	%		
Fig 5. OSA verified by ODI				M MS DSA OSA	A	CONTROI GROUP
68 %				3	32 %	
Fig 6. Stop Bang Questionnaire					NO	YES
CONCLUSIONS	The stud pain, are link was	dy reveale e likely to identified	d key in have mi d betwe	isights in ild to se en ODL	nto th vere ( and p	ne link OSA. S ain ch

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### **Fig 7 - Partial correlation between quantitatives variables**



ODI: Oxygen desaturation index. BMI: Body mass index; Sat < 90%: O2 Saturation < 90%; Pittsburg Sleep quality index, PSC: Catastrophizin Pain Scale; ESS: Epworth Sleepiness Scale Spearman' rank test. Two-tailed significance: \*p > .05, \*\* p < .01, \*\*\* p < .001

#### Fig 8 - Significant statistical differences between quantitative variables



#### YES

There were no significant differences for the other variables.

link between OSA and painful TMD, focusing on the role of ODI. Many TMD patients, especially those with chronic A. Significant associations were found between ODI and factors like BMI and oxygen saturation levels, but no direct ACKNOWLEDGMENT: n characteristics or psychological factors. This suggests that while OSA is common in TMD patients, its direct impact on pain and psychological conditions is complex and needs further study.

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