

## IMPACT OF TEMPOROMANDIBULAR DYSFUNCTION AND PROBABLE BRUXISM ON SLEEP QUALITY AND QUALITY OF LIFE

<u>M. Santos<sup>1</sup></u>, B. Fonseca<sup>1</sup>, J. J. Mendes<sup>1</sup>, F. Exposto<sup>2</sup>, C. Manso<sup>1</sup>, A. Almeida<sup>1</sup>

<sup>1</sup> Egas Egas Moniz Center for Interdisciplinary Research (CiiEM), Caparica, PORTUGAL <sup>2</sup> Dentistry and Oral Health, Aarhus University, Aarhus, DENMARK

## INTRODUCTION

Painful temporomandibular disorder (TMD), of musculoskeletal or articular origin, has a high prevalence and is considered the main

This investigation was conducted over a period of three months at the Egas Moniz University Clinic. A total of 93 adult patients underwent a clinical diagnosis based on the DC/TMD protocol with standardized measurements. Participants were categorized into groups according to their diagnosis. All participants completed questionnaires to assess oral health-related quality of life (OHIP-14: Oral Health Impact Profile) and sleep quality (Pittsburgh Sleep Quality Index). Data were analyzed using the Mann-Whitney and Kruskal-Wallis tests.





cause of non-dental pain in the orofacial region (Melchior et al., 2019). Chronic pain resulting from TMD can significantly compromise physical and psychological well-being, negatively impacting quality of life (Trize et al., 2018; Lee & Auh, 2022). This type of pain is often associated with symptoms of anxiety and depression, contributing to greater functional impairment and increased perceived pain intensity (Costa & Gomez, 2023). Bruxism, defined as a centrally regulated masticatory muscle activity rather than a pathology, has a multifactorial etiology that includes sleep disorders such as obstructive sleep apnea (Lobbezoo et al., 2018; Manfredini et al., 2023).Sleep is essential for both physical and mental health (Jain et al., 2022), yet its importance is often underestimated, which may impair daily performance (Bhatnagar, 2018; Jain et al., 2022).

## OBJECTIVE



The aim of the research was to assess the impact of bruxism and temporomandibular dysfunction associated with pain on the quality of life and sleep quality of adult individuals.



## Figure 1. Palpometers used for standardized muscle palpation



The results showed that the diagnosis of painful temporomandibular disorder and probable bruxism are significantly associated with individuals' quality of life. However, the relationship between the groups and sleep quality did not show statistically significant values. Regarding the correlation between variables, a significant association was found between sleep quality and quality of life, as well as between chronic pain and quality of life.

			~ ~ ~					N 4		<b>N</b> <i>A</i> <sup>1</sup>				PSQI	OHIP
		Mean	SP	Minimum	Maximun	P value		Mean	SP	Minimum Maximun		P value	PSQI	Rho = 1	Rho = 0,417 *
r		57	A	n	4.4		(CII	1 0	С	0	17		FJQI	RIIO - I	R10 - 0,417
	GII	5,7	4,5	Z	14	´GII	Ι,Ο	2	U	17			_	P<0.001	

GIII	6,2	4,5	1	14	p-= 0,407	GIII	5,8	8	0	42	p-= 0,017
GIV	4,8	4,2	1	11		GIV	2,4	1	0	33	

Table 1 – Sleep quality differences between groups

Table 2 – Sleep quality differences between groups

 OHIP-14
 Rho = 0,417 \*
 Rho = 1

 P<0.001</td>
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Table 3 – Correlation between PSQI and OHIP-14 Sig.: \* (pValue <0,05)



It was concluded that the presence of a temporomandibular disorder diagnosis and probable bruxism is associated with a poorer quality of

life. Similarly, reduced quality of life is linked to poorer sleep quality. Furthermore, the findings from palpation using palpometers were

consistent with those obtained through clinical diagnosis. These results underscore the need for future research involving representative samples and definitive diagnostic criteria.

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