

## Psychopathology in Obstructive Sleep Apnea: the role of severity of the Apnea / Hypopnea Index

Valentina Ladera<sup>1</sup>, Paulo Sargento<sup>2</sup>, Victoria Perea<sup>1</sup>, Miguel Faria<sup>3</sup>, Mónica Teixeira<sup>4</sup> & Ricardo Garcia<sup>1</sup>

<sup>1</sup> Universidad de Salamanca, Spain

<sup>2</sup> Escola Superior de Saúde Ribeiro Sanches, NICiTeS, COPELABS, Portugal. paulo.sargento@erisa.pt;

<sup>3</sup> Escola Superior de Saúde Ribeiro Sanches, NICiTeS, Portugal

<sup>4</sup> Escola Superior de Saúde Ribeiro Sanches, NICiTeS, REQUIMTE/ISEP, Portugal

**Abstract:** The literature often describes the presence of psychopathology, essentially of an anxious and depressive nature, in patients diagnosed with Obstructive Sleep Apnea (OSA) (Asghari, Mohammadi, Kamrava, Tavakoli & Farhadi, 2012). However, given the existence of comorbidities (Pinto, Ribeiro, Cavallini, Duarte & Freitas, 2016), the relationship between the diagnosis of OSA and psychopathology is not clarified (BaHamman et al, 2016; Saunamäki & Jehkonen, 2007), much less the repercussion of the severity of sleep disturbance (measured by Apnea/Hypopnea Index [AHI]) in the severity of psychopathology (Luik, Noteboom, Zuurbier, Withmore, Hofman & Tiemeier, 2015). Our prediction is that by controlling for major comorbidities, patients with more severe AHI would report higher emotional maladjustment.

Sixty subjects were assessed by a self report measure of Psychopathology (SCL 90 R), 40 of them (31 males and 9 females) were untreated newly diagnosed for OSA, using polysomnography type I (Apnea / Hypopnea Index, M = 39.01, SD = 27.16, range = (SD = 8.90), and the other 20 (15 males and 5 females) presented no symptoms of OSA (M = 51.60 years, SD = 10, 70), and scored below the cut off score in a screening measure for the risk of OSA (Questionnaire for Sleep Apnea Risk) and in a measure of excessive daytime sleepiness (Epworth Sleepiness Scale). Concerning the subjects with OSA, of the 68 subjects initially recruited, 28 were excluded due to major comorbidities (untreated hypertension [10], diabetes or metabolic syndrome [8], cardiac [7] or cerebrovascular disorders [3]). All subjects were volunteers (not paid) who gave their informed consent to the study's objectives. This study was approved by the scientific and ethical committee of the clinical institutions where the subjects were diagnosed for OSA.

ANOVA suggests that subjects diagnosed with OSA have higher rates of psychopathology, although, unexpectedly, post hoc tests show, that those diagnosed with the lowest severity are the most affected.

The association between OSA and the observed psychopathology seems not linear, and research should try to establish the relationship between the pathophysiology of sleep-disordered breathing and the psychophysiology of anxious and depressive symptoms.

**Keywords:** obstructive sleep apnea, psychopathology, apnea / hypopnea index

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