

# Assessment of Sleep Disturbance in Oral Lichen Planus and Validation of PSQI: a case-control multicenter study from the SIPMO (Italian Society of Oral Pathology and Medicine\*)

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## Abstract

**Background:** The well-being of oral lichen planus patients (OLPs) may be strongly influenced by a poor quality of sleep (QoS) and psychological impairment. The aims were to analyze the prevalence of sleep disturbance, anxiety and depression in OLPs and to validate the Pittsburgh Sleep Quality Index (PSQI) in OLPs.

**Methods:** 300 keratotic OLPs (K-OLPs), 300 with predominant non-keratotic OLP (nK-OLPs) and 300 controls were recruited in 15 Italian universities. The PSQI, Epworth Sleepiness Scale (ESS), Hamilton Rating Scales for Depression and Anxiety (HAM-D and HAM-A), Numeric Rating Scale (NRS), Total Pain Rating Index (T-PRI), were administered.

**Results:** OLPs had statistically higher scores than the controls in the majority of the PSQI sub-items (p-values <0.001\*\*). Moreover, OLPs had higher scores in the HAM-D, HAM-A, NRS and T-PRI (p-values <0.001\*\*). No differences in the PSQI sub-items' scores were found between the K-OLPs and nK-OLPs, although nK-OLPs suffered from higher levels of anxiety, depression and pain (p-values: HAM-A, 0.007\*\*, HAM-D, 0.009\*\*, NRS, <0.001\*\*, T-PRI, <0.001\*\*). The female gender, anxiety, depression (p-value: 0.007\*\*, 0.001\*\*, 0.020\*) and the intensity of pain, anxiety and depression (p-value: 0.006\*\*, <0.001\*\*, 0.014\*) were independent predictors of poor sleep (PSQI>5) in K-OLPs and nK-OLPs, respectively. The PSQI's validation demonstrated good internal consistency and reliability of both the total and subscale of the PSQI.

**Conclusions:** The OLPs, reported an overall impaired QoS which seemed to be an independent parameter according to the regression analysis. Hence, clinicians should assess QoS in OLPs and treat sleep disturbances in order to improve OLPs management.

**Keywords:** anxiety; insomnia; mood disturbance; oral lichen planus; sleep disturbance.

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