

THE DEFICIENCIES OF EPWORTH SLEEPINESS SCALE IN THE EVALUATION OF SUBJECTIVE SLEEPINESS IN SUBJECTS WITH OBSTRUCTIVE SLEEP APNEA AND RELATED FACTORS

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Background: Daytime sleepiness plays an importance role in both guiding the somnologists for further evaluation of patients with the clinical suspicion of obstructive sleep apnea(OSA), as well as determining the need of positive airway pressure treatment. Although Epworth Sleepiness Scale(ESS) is an important tool used in the assessment of daytime sleepiness, most of the patients in our sleep center present low ESS scores despite subjective sleepiness, poor sleep quality and severe OSA disease. Low ESS score is predicted to be associated with certain deficiencies in the questions of ESS in the evaluation of sociocultural features and daily habits of the patients. In our study, we aimed to evaluate the factors associated with low ESS scores in subjects investigated for OSA.

Methods: In this prospective cohort study, we recorded the ESS score and Pittsburg sleep quality index(PSQI) score of patients that applied to our sleep center between November 2022-January 2023 and were further evaluated with polysomnography (PSG). Additional questions regarding literacy, vehicle use, driver licence and travelling habits were asked. Sleep indices of patients with AHI \geq 5 were recorded following PSG. Chi-square, t test and Mann Whitney U test were used in the comparison of categorical and linear variables respectively.

Results: 96 patients with mean age 51+/-12, 68% male, median AHI 34.6(7-105), ESS 7(0-22), PSQI 9(2-15) were included. Patients with ESS $<$ 11(n=67), had median AHI 32(7-105), PSQI 8(2-15). Among patients with ESS $<$ 11 and AHI \geq 15(n=52); 10% were illiterate, 67% performed reading only from cellular phone, 88% did not attend the social setting examples in ESS, 53% did not travel frequently and 40% did not use any vehicle. The listed factors were also associated with low ESS(p $<$ 0.001). The comparison of sleep indices and PSQI scores of patients with ESS $<$ 11 and \geq 11 did not demonstrate statistically significant difference.

Conclusions: Although ESS plays an important role in the diagnosis and treatment processes of OSA patients, it may be inadequate in the assessment of the demographical features and daily habits of patients from different sociocultural settings. Clinicians should be aware that the patients may have severe OSA and poor sleep quality despite low ESS scores and should evaluate each patient individually.