



SLEEP QUALITY EVALUATION IN PATIENTS WITH EPILEPSY

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Introduction

Sleep disturbances are common in people with epilepsy. Therefore, patients are more likely to experience daily fatigue and pathological sleepiness, what can trigger epileptic seizures. [1]

Hypotheses

1. Sleep quality is worse in patients with focal epilepsy.
2. Frequent nocturnal seizures, prolonged seizures, irregular sleep habits worsen the quality of sleep.
3. Treatment with lamotrigine interferes with sleep quality.
4. Patients with insomnia have increased daytime sleepiness.

Aim

To assess the sleep quality and daytime sleepiness in epilepsy patients.

Materials and methods

This study was developed in the Lithuanian tertiary epilepsy centre. Sleep quality was assessed by Pittsburgh Sleep Quality Index (PSQI), Epworth Sleepiness Scale and Insomnia Severity Index (ISI). Additional demographic and disease-related information was collected from outpatient cards. Data were processed with Microsoft Excel 2016, and analyzed by IBM SPSS® (version 23.0). Difference was considered statistically significant if $p < 0.05$.

Results

Table 1. Demographic data

N=167	
Mean age	36.05±15.75 years
Women	96 (57.5%)
Men	71 (42.5%)
Mean epilepsy duration	14.35±11.82 years
Antiepileptic treatment:	
- monotherapy/polytherapy/unknown	61 (36.5%)/84 (50.3%)/22 (13.2%)
- lamotrigine/other drug/unknown	62 (37.1%)/83 (49.7%)/22 (13.2%)

Figure 1. Epilepsy type

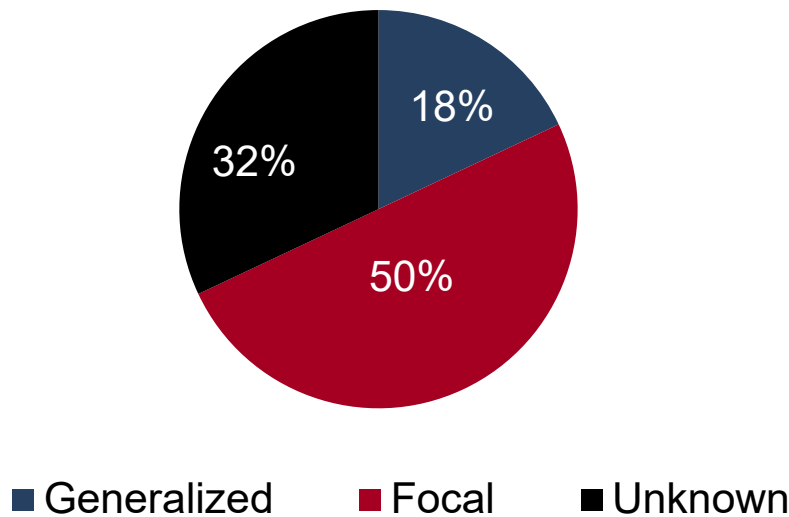


Figure 2. PSQI and epilepsy type

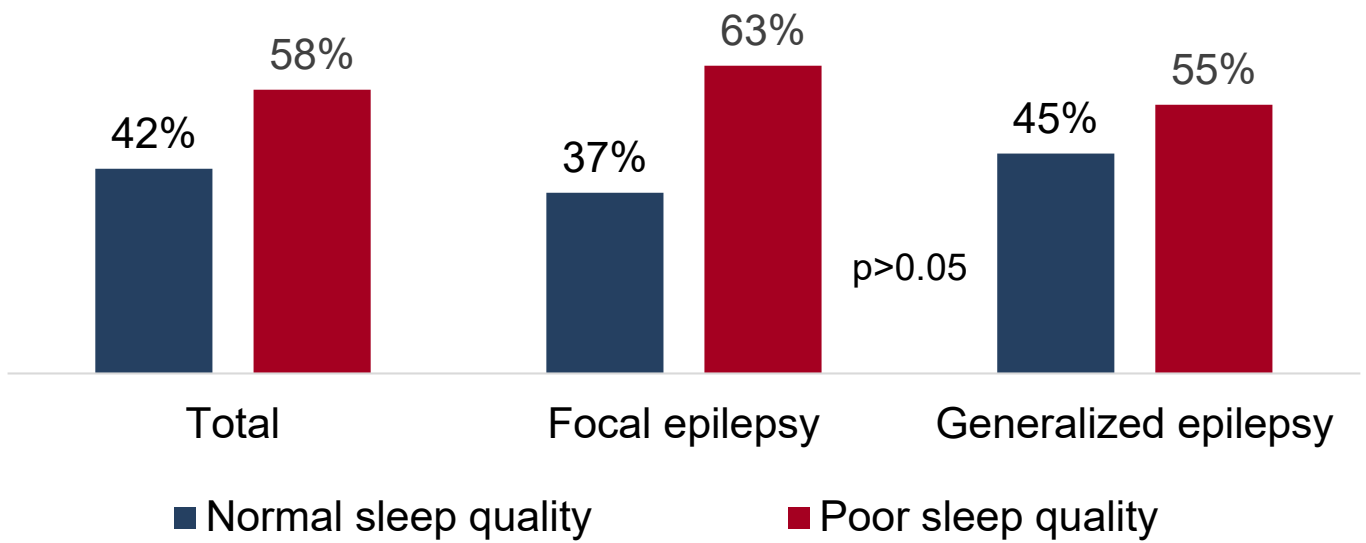


Figure 3. ISI and epilepsy type

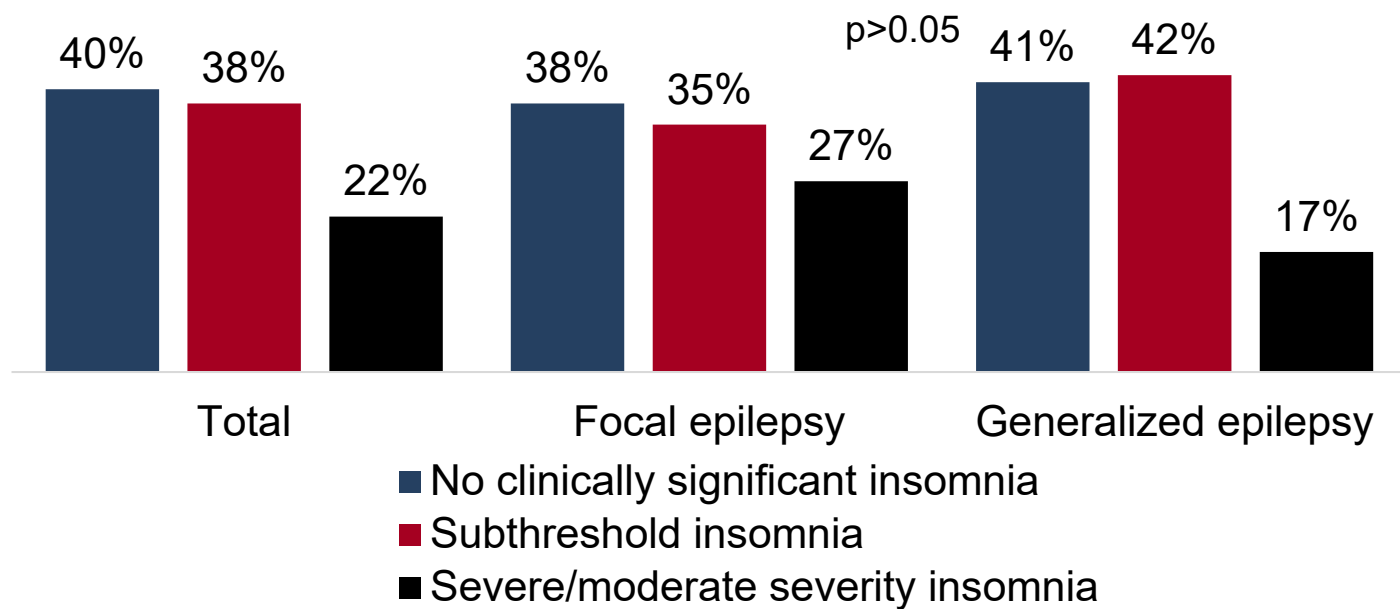


Figure 4. Epworth Sleepiness Scale and epilepsy type

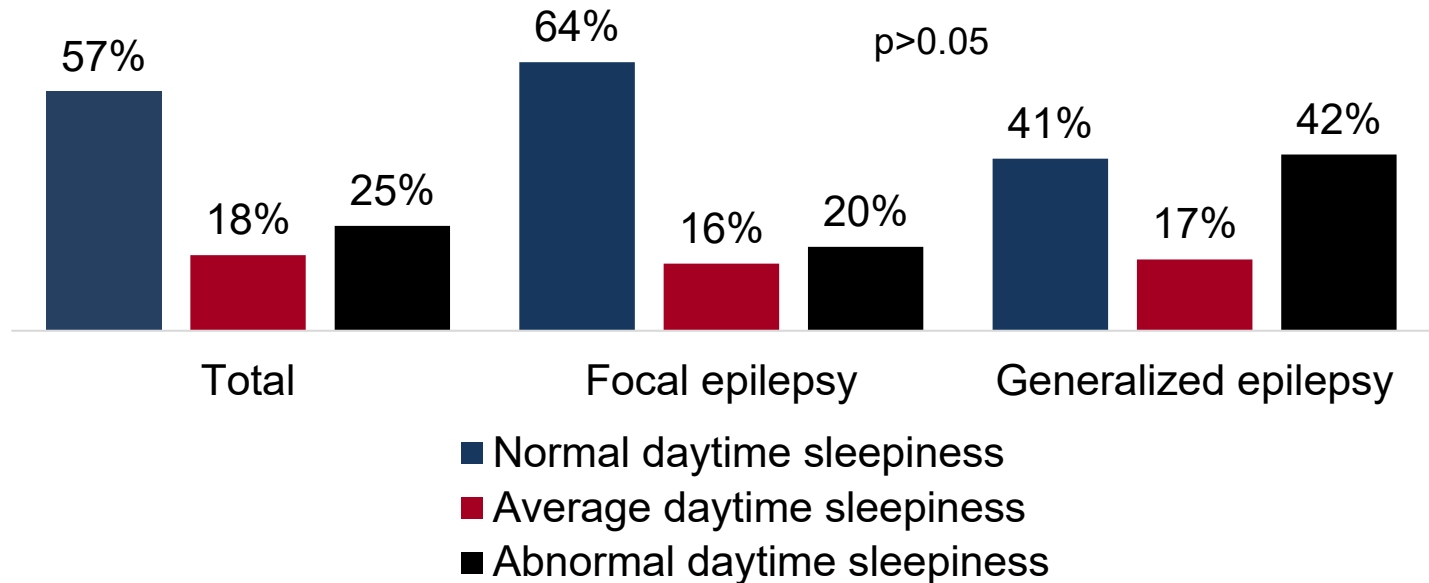


Figure 5. PSQI and nocturnal seizures

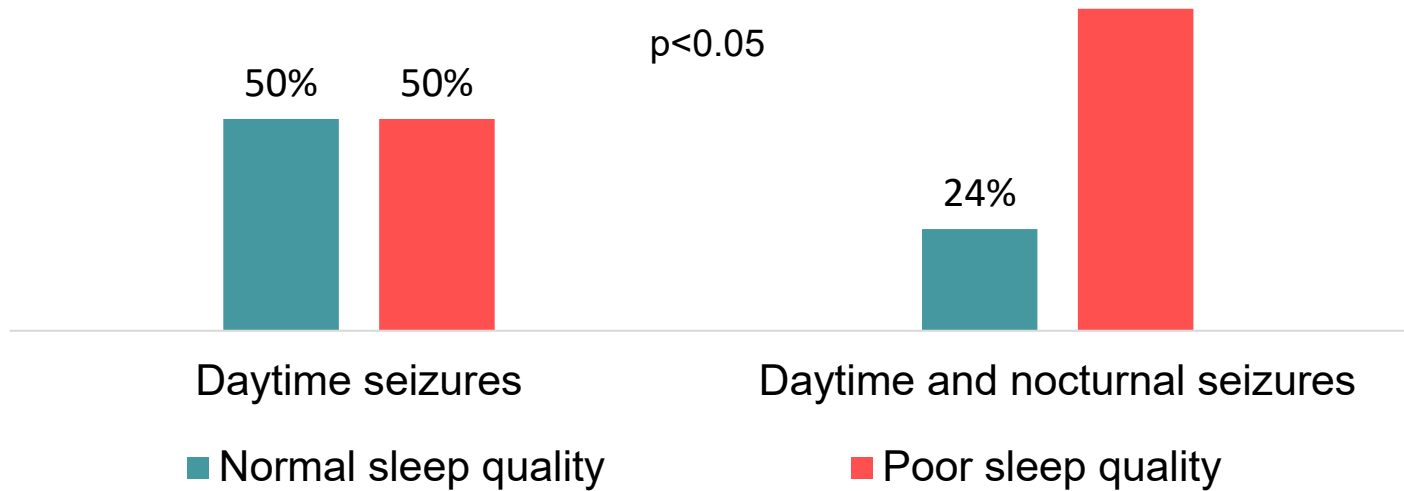


Figure 6. Insomnia (ISI) and seizure duration

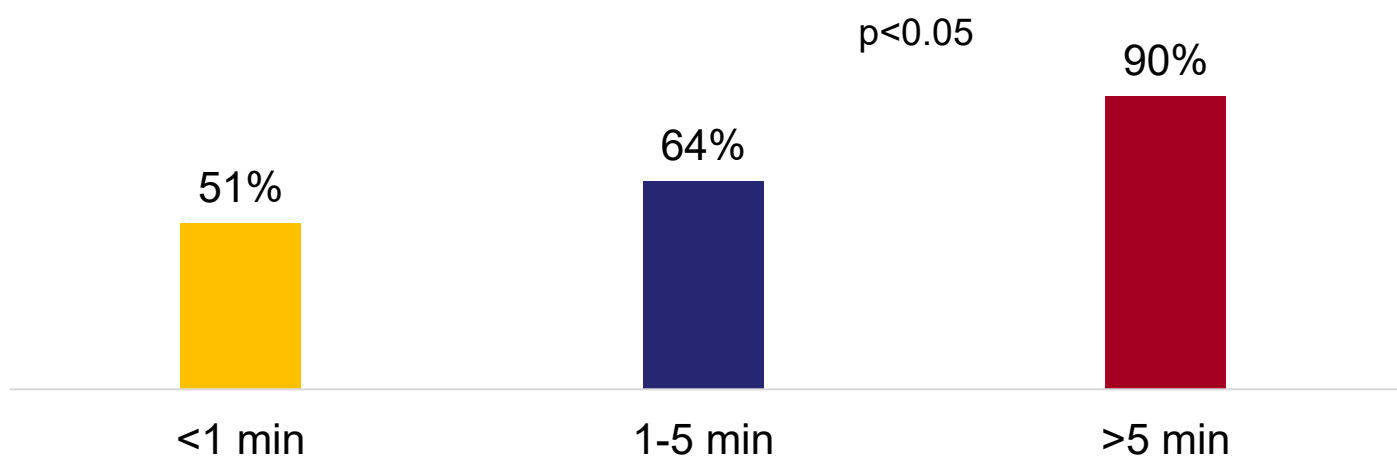


Figure 7. PSQI and ISI in regular / irregular sleep

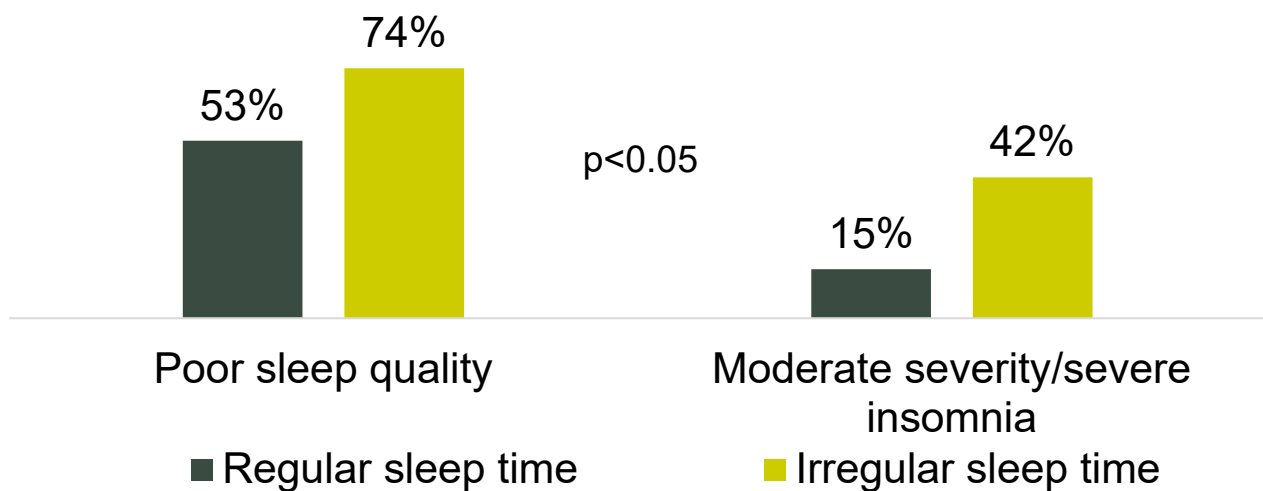
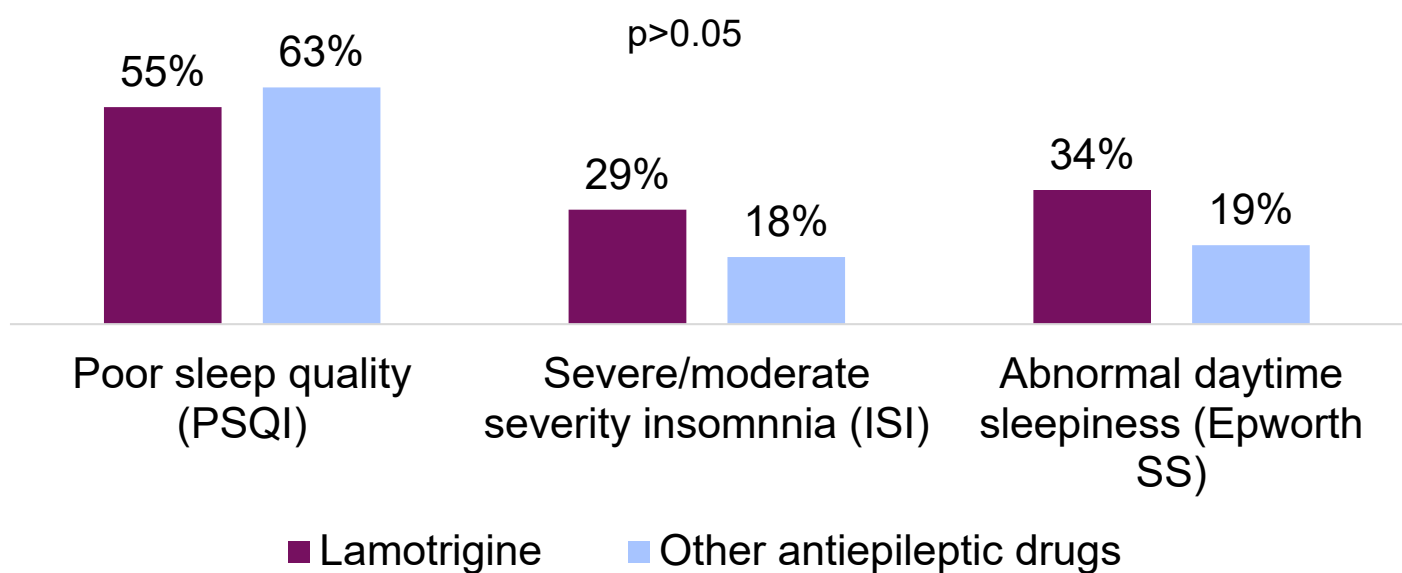


Figure 8. Lamotrigine vs other antiepileptic drugs



Discussion

The findings of our study confirmed results of other studies: patients with epilepsy have a poor sleep quality. Insomnia was predominant sleep impairment in the majority of patients. Sociodemographic and clinical variables (age, gender, duration of epilepsy, seizure type and frequency, and AEDs) had no impact on sleep quality in epilepsy patients [2,3], though in other study lamotrigine increased REM sleep in patients with refractory epilepsy [4].

Conclusions

1. More than a half of patients with epilepsy have a poor sleep quality.
2. Worse sleep quality is related to irregular sleep time habits, nocturnal and prolonged seizures.
3. We did not find the difference in sleep quality in patients with focal and generalized epilepsy.
4. In our study, the quality of sleep in lamotrigine-treated patients was the same as with other AEDs

References

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- [2] Stanišewska A, Mąka A, Religioni U, Olejniczak D. Sleep disturbances among patients with epilepsy. *Neuropsychiatr Dis Treat*. 2017;13:1797-1803.
- [3] Bonanni E, Galli R, Gori S, et al. Neurophysiological evaluation of vigilance in epileptic patients on monotherapy with lamotrigine. *Clin Neurophysiol* 2001;112:1018–1022.
- [4] N, Perry M, Lee J, et al. The effects of lamotrigine on sleep in patients with epilepsy. *Epilepsia* 2001;42:1569–1573.