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Prevalence of sleep disorders among medical students and their association with poor academic performance: A cross-sectional study

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Abstract: Background: Sleep quality is of paramount importance for human health. This multi-site study measures the proportion and types of self-reported sleep disorders in medical students and evaluates their association with academic performance by Grade Point Average (GPA). Materials and methods: A cross-sectional survey was conducted on medical students from two medical schools in Jordan during the 2018/2019 academic year. The study utilized the SLEEP-50 questionnaire to estimate the proportion of several sleep disorders and their effects on daily functioning. Below average GPAs were considered poor academic performance. Results: 1041 medical students' online surveys were analyzed from two medical schools' campuses, representing a 29.7% response rate. Their mean age was 22 ± 2.1 years (ranging from 18 to 37) and 52.6% were female. The mean body mass index was 24.2 ± 4.4 kg/m². According to the SLEEP-50 questionnaire, the prevalence of sleep disorders among studied medical students ranged from 0.6% for sleep state misperception (SSM) to 23.1% for hypersomnia. Using binary logistic regression, after adjusting for gender and obesity, poor academic performance was associated with a risk for insomnia [adjusted odds ratio (OR) = 1.96, $p < 0.001$]; affective disorder [OR = 2.24, $P < 0.001$]; SSM [OR = 6.40, $p = 0.045$]; narcolepsy [OR = 9.54, $p = 0.045$]; and circadian rhythm disorders [OR = 2.03, $p < 0.001$]. Conclusion: Sleep disorders are common among medical students. Several sleep disorders were associated with poor academic performance. Proper diagnosis and treatment of sleep disorders may remedy this issue.