

Association of sleep disorders with overweight and obesity in a Portuguese community sample of adolescents

Background: Several studies have shown that overweight and obesity is associated with sleep disorders.

Aim: The aim of this study was to determine the association between sleep disorders and overweight and obesity in Portuguese adolescents.

Methods: In a cross-sectional approach we assessed 7136 students from twenty-six schools of the district of Viseu, Portugal. The overweight and obesity was evaluated by the body mass index (BMI). Insomnia was defined based on the DSM-IV criteria, as the presence of one or more symptoms: difficulty initiating sleep; difficulty maintaining sleep; early morning awakening and difficulty getting back to sleep; non-restorative sleep.

Results: The prevalence of overweight and obesity among the adolescents is 32.9% (higher in male gender 37.9% vs. 28.6%, $p < 0.001$) and 4.7% (higher in male gender 6.7% vs. 2.9%, $p < 0.001$), respectively. The prevalence of symptoms of insomnia is 21.4%. Insomnia is present in 22.4% of adolescents with overweight and 25.5% with obesity. Insomnia is associated with overweight (OR=1.32 95%CI 1.1-1.86) and obesity (OR=1.11 95%CI 1.0-1.30). Among the female gender insomnia was associated with overweight (OR=1.2 95%CI 1.0-1.43) and obesity (OR=1.64 95%CI 1.2-2.78) and also among the male gender (overweight, OR=1.31 95%CI 1.1-1.71 and obesity, OR=1.62 95%CI 1.01-2.61).

Conclusions: The association between sleep disorders and obesity has not been fully clarified, however, several studies predict that the association is bidirectional.