

# The Association Between Insomnia and Sleep Duration in Adults With Attention-Deficit Hyperactivity Disorder: Results From a General Population Study.

Wynchank D, Ten Have M, Bijlenga D, Penninx BW, Beekman AT, Lamers F, de Graaf R, Kooij JJS.

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## Abstract

### STUDY OBJECTIVES:

Insomnia and short or long sleep duration are important comorbid conditions in adults with attention-deficit hyperactivity disorder (ADHD), but reports of the association vary. In a general population study, we evaluated the relationship between ADHD symptom severity, insomnia symptoms, and sleep duration in adults.

### METHODS:

Data were from the third wave of the Netherlands Mental Health Survey and Incidence Study-2 (NEMESIS-2;  $n = 4,618$ ). ADHD symptom severity and symptom dimensions (hyperactivity and inattention) were assessed using the Adult ADHD Self-Report Scale screener. Self-reported insomnia symptoms (Insomnia Rating Scale; IRS) were defined as clinically relevant if  $IRS \geq 9$ . Self-reported short sleep duration was defined as  $\leq 6$  hours, and long sleep duration as  $\geq 10$  hours.

### RESULTS:

Within the group with clinically relevant ADHD symptoms, 43% reported significant insomnia symptoms (odds ratio [OR] = 2.66, 95% confidence interval [CI] 1.74-4.07); 41% short sleep duration (relative risk ratio [RRR] = 1.94, 95% CI 1.31-2.85) and 6% long sleep (RRR = 5.87, 95% CI 1.97-17.45). Increased inattention symptoms were associated with  $IRS \geq 9$ , short and long sleep duration in fully adjusted models (OR = 1.10, 95% CI 1.06-1.14; RRR = 1.06, 95% CI 1.02-1.09; RRR = 1.16, 95% CI 1.05-1.28, respectively). Increased hyperactivity symptoms were associated with  $IRS \geq 9$  (OR = 1.17, 95% CI 1.11-1.23) and short sleep duration (RRR = 1.12, 95% CI 1.05-1.19).

### CONCLUSIONS:

Both clinically significant ADHD symptoms and inattention and hyperactivity symptom dimensions were consistently associated with insomnia symptoms and altered sleep duration. These associations confirm that sleep disturbances should be assessed and given appropriate clinical attention in adults with ADHD.