Sleeping, TV, Cognitively Stimulating Activities, Physical Activity, and ADHD Symptom Incidence in Children: A Prospective Study.

Peralta GP, Forns J, García de la Hera M, González L, Guxens M, López-Vicente M, Sunyer J, García-Aymerich J.

doi: 10.1097/DBP.0000000000000539.

Abstract

OBJECTIVE:
To analyze associations between time spent sleeping, watching TV, engaging in cognitively stimulating activities, and engaging in physical activity, all at 4 years, and (1) attention-deficit/hyperactivity disorder (ADHD) symptoms and (2) behavior problems, both assessed at 7 years, in ADHD-free children at baseline.

METHOD:
In total, 817 participants of the Infancia y Medio Ambiente birth cohort, without ADHD at baseline, were included. At the 4-year follow-up, parents reported the time that their children spent sleeping, watching TV, engaging in cognitively stimulating activities, and engaging in physical activity. At the 7-year follow-up, parents completed the Conners' Parent Rating Scales and the Strengths and Difficulties Questionnaire, which measure ADHD symptoms and behavior problems, respectively. Negative binomial regression models were used to assess associations between the activities at 4 years and ADHD symptoms and behavior problems at 7 years.

RESULTS:
Children (48% girls) spent a median (p25-p75) of 10 (10-11) hours per day sleeping, 1.5 (0.9-2) hours per day watching TV, 1.4 (0.9-1.9) hours per day engaging in cognitively stimulating activities, and 1.5 (0.4-2.3) hours per day engaging in physical activity. Longer sleep duration (>10 hours per day) was associated with a lower ADHD symptom score (adjusted incidence rate ratio = 0.97, 95% confidence interval, 0.95-1.00). Longer time spent in cognitively stimulating activities (>1 hours per day) was associated with lower scores of both ADHD symptoms (0.96, 0.94-0.98) and behavior problems (0.89, 0.83-0.97). Time spent watching TV and engaging in physical activity were not associated with either outcomes.

CONCLUSION:
A shorter sleep duration and less time spent in cognitively stimulating activities were associated with an increased risk of developing ADHD symptoms and behavior problems.