Parental smoking and depression, and attention-deficit hyperactivity disorder in children and adolescents: Korean national health and nutrition examination survey 2005-2014

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Abstract

INTRODUCTION:
We aimed to investigate the risk factors associated with attention-deficit hyperactivity disorder (ADHD) in children and adolescents using a nationally representative sample of the Korean population.

METHODS:
Data from children and adolescents aged less than 18 years (n = 23,561) were obtained from the Korean National Health and Nutrition Examination Survey, 2005 to 2014. ADHD was assessed using a self-reported diagnosis of ADHD. We estimated the annual prevalence and number of Korean children and adolescents with physician-diagnosed ADHD from 2005 to 2014. We considered various risk factors including demographics, obesity, and family environment (household income, parental age, depression in adults in the household, and exposure to environmental smoke at home). The relationship between ADHD and the considered risk factors was evaluated using multiple logistic regression.

RESULTS:
The annual prevalence of physician-diagnosed ADHD showed a 4-fold increase (0.35% in 2005 and 1.36% in 2014) over the study period. Among ADHD patients, boys and girls constituted 78% and 22%, respectively. Total smoking amounts and depression in adults in the household were significantly associated with children's ADHD. When the analysis was limited to parental effects, only the father's smoking amount and depression were associated with the children's ADHD.

DISCUSSION:
This study identified adults' smoking and depression as family environmental factors associated with children's ADHD. From a public health care perspective, this result illuminates the need for awareness programs emphasizing a parent's conditions that may influence the development of ADHD in children.