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Attention-Deficit/Hyperactivity Disorder (ADHD) in Children and Adolescents: Mental Health and Physical Co-Morbidity in Nordbaden / Germany

With reported prevalence rates of 2-10%, ADHD is one of the most common disorders of childhood and adolescence. Only recently, comorbidity has been recognized as one of the most important aspects of the disorder. **OBJECTIVES**: To determine real-world prevalence rates for psychiatric and non-psychiatric comorbid conditions in children and adolescents with a diagnosis of ADHD according to ICD-10 criteria (Hyperkinetic [Conduct] Disorder, HKD/HKCD, F90.0/F90.1), using the Nordbaden claims database covering 2.238m insured persons in South-Western Germany (82% of the regional population). **METHODS**: n=11,245 ADHD patients age 19 or less were identified. The ADHD group was matched with a non-ADHD cohort (n=11,228) on a 1:1 ratio based on age and gender, and the rate of co-existent conditions was compared between both groups. Chi-square statistics was used to explore levels of significance. **RESULTS**: The most frequent psychiatric comorbidities (in 20-40% of patients, each; all $p<0.001$; relative risks compared to control cohort 3-8) included mood and affective disorders, conduct disorders, specific developmental disorders, including those of scholastic skills. Significant associations (similar magnitude) were also found for ADHD and adjustment disorders, habit and impulse disorders, tic disorders, sleep disorders, disorders associated with sexual development, maltreatment syndromes, mental retardation, lack of expected normal physiological development and disorders due to brain damage – though these occurred less commonly (<10% of patients each). The analyses also revealed significantly increased relative risk (25-100%) for non-psychiatric disorders involving immune mechanisms, neurological disorders, metabolic disorders, diseases of the skin and ear, pulmonary and upper respiratory diseases, certain gastrointestinal disorders, diseases of the blood and blood-forming organs, and accidents and injuries (all $p<0.001$). Detailed findings by age and gender will be presented. **CONCLUSIONS**: These data indicate substantial comorbidity associated with ADHD in children and adolescents. They provide a basis for further epidemiological research and for analyses of the cost associated with ADHD.

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