# Comorbidity across childhood-onset neuropsychiatric disorders

### Akademisk avhandling

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av

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Avhandlingen baseras på följande arbeten:

- I. Stahlberg O, Soderstrom H, Rastam M, & Gillberg C. Bipolar disorder, schizophrenia, and other psychotic disorders in adults with childhood onset AD/HD and/or autism spectrum disorders. *J Neural Transm*, 2004; 111(7): 891-902.
- II. Anckarsäter H, Stahlberg O, Larson T, Hakansson C, Jutblad S. B, Niklasson L, et al. The impact of ADHD and autism spectrum disorders on temperament, character, and personality development. *Am J Psychiatry*, 2006; 163(7): 1239-1244.
- III. Hofvander B, Ståhlberg O, Nydén A, Wentz E, Degl'innocenti A, Billstedt E, Forsman A, Gillberg C, Nilsson T, Rastam M, Anckarsäter H. Life History of Aggression scores are predicted by childhood hyperactivity, conduct disorder, adult substance abuse, and low cooperativeness in adult psychiatric patients. *Psychiatry Res*, 2010; 185(1-2): 280-285.
- IV. Ståhlberg O, Anckarsäter H, & Nilsson T. Mental health problems in youths committed to juvenile institutions: prevalences and treatment needs. *Eur Child Adolesc Psychiatry*, 2010; 19(12): 893-903.
- V. Ståhlberg O, Boman S, Robertsson C, Kerekes N, Anckarsäter H, Nilsson T. A comparison between youths committed to juvenile institutions with comorbid substance abuse (SUD) and ADHD versus SUD without ADHD respective those without SUD: Few differences in outcome in a follow-up study on criminal behaviour and health care use. *Submitted manuscript*.



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# Comorbidity across childhood-onset neuropsychiatric disorders

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#### **ABSTRACT**

**Background**: Attention-Deficit/Hyperactivity Disorder (ADHD), and Autism Spectrum Disorders (ASDs) have clinically found to be more comorbid with each other and with other psychiatric conditions than previously assumed. It is, however, difficult to capture the complexity of these comorbidities using current diagnostic systems, where exclusion criteria prevent simultaneous diagnosis. Thus, in order to describe this complexity and its consequences for the individual, it is important to describe actual comorbidity in different clinical contexts.

Aims: The overall purpose of this thesis is to describe the prevalence and comorbidity between ASD and ADHD, and among them and other psychiatric conditions. Specific aims were to: describe comorbidity in a group of adult out-patients with ADHD and/or ASDs (Paper I); investigate the prevalence of personality disorders and describe the personality profiles of the same group (Paper II); describe psychiatric symptoms associated with aggressive behaviors in adult psychiatric patients (Paper III); describe comorbidity in a group of adolescents placed in special youth institutions (Paper IV); and to investigate whether comorbid ADHD and substance abuse is associated with a more negative outcome, that is, more criminal recidivism, health care needs, and untimely death (Paper V).

Methods and results: Papers I and II were based on diagnostic and demographic cross-sectional data showing that ADHD and ASD overlap greatly with each other, and that there is a significant overlap between ADHD and bipolar disorder and between ASDs and psychosis. Personality disorder diagnoses are also common in these diagnostic groups, showing specific personality profiles associated with ADHD, ASD, and those with comorbid ADHD and ASD. In Paper III, aggressive behaviors were compared between a group of polyclinic psychiatric patients and a group of forensic psychiatric patients, and both groups reported similarly high scores on aggressiveness. Paper IV was based on cross-sectional data on institutionalized adolescents, which in Paper V was combined with longitudinal follow-up data. Psychiatric diagnoses in general, and of ADHD and ASD in particular, were high in this group, and criminal recidivism and health care use were overall very high. There were small differences between the groups with comorbid ADHD and substance abuse disorders (SUD), SUD only, and, no SUD in criminal recidivism, health care needs, and untimely death.

Conclusion: Comorbidity between ADHD and ASD and other psychiatric diagnoses is common among psychiatric patients, and is in many cases associated with character immaturity, aggression, and personality disorders. Outcomes over time tend to worsening with increasing comorbidity, especially in cases with comorbid SUD and neuropsychiatric disorders. These complex states constitute diagnostic and treatment challenges for psychiatry and its classic divisions between child and adolescent versus adult psychiatry, mental illness versus personality disorders, and psychological versus medical interventions.

**Keywords**: Autism spectrum disorders, ADHD, disruptive behaviors, comorbidity, clinical psychiatric patients, juvenile delinquency, outcome, criminal recidivism

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