

The importance of considering neurodevelopmental disorders in childhood obesity care

Akademisk avhandling

som för avläggande av medicine doktorsexamen vid Sahlgrenska akademien,
Göteborgs universitet kommer att offentlig försvaras i Järneken, Diagnosvägen 15,
den 11 juni, klockan 9.00

av Maria Dellenmark Blom

Fakultetsopponent: Samuele Cortese, Professor of Child and Adolescent Psychiatry,
the University of Southampton, United Kingdom

Avhandlingen baseras på följande delarbeten

- I. Dellenmark-Blom M, Järholm K, Sjögren L, Levinsson A, Dahlgren J. Family screening for neurodevelopmental problems and its associations with child cognitive function enable tailored treatment for childhood obesity. *Acta Paediatr.* 2024 Sep;113(9):2107-2118.
- II. Dellenmark-Blom M, Järholm K, Sjögren L, Levinsson A, Dahlgren J. Neurodevelopmental disorders in children seeking obesity treatment-associations with intellectual ability and psychiatric conditions. *Front Psychiatry.* 2024 Aug 19;15:1332598.
- III. Dellenmark-Blom M, Järholm K, Sjögren L, Levinsson A, Björk A, Dahlgren J. High prevalence and overlap of neurodevelopmental problems in children with obesity. Accepted April 2026 *Obesity Facts.* DOI: 10.1159/000552403.
- IV. Dellenmark-Blom Ma, Dellenmark-Blom Mi, Järholm K, Sjögren L, Björk A, Dahlgren J. Coping strategies in children and adolescents with obesity: A qualitative study from the parents' perspective. Manuscript.

**SAHLGRENKA AKADEMIN
INSTITUTIONEN FÖR KLINISKA VETENSKAPER**



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Abstract

In this thesis, we evaluated executive and intellectual functioning, neurodevelopmental problems (motor, language, perceptual, emotional/behavioural), psychiatric conditions and family factors, in children with obesity- with and without neurodevelopmental disorders (NDDs). Additionally, Paper IV explored condition-specific coping and its related stressors in children with obesity from a qualitative parental perspective.

Key findings: Among children with NDDs, ADHD and autism was most diagnosed. Around one third of previously undiagnosed children were diagnosed by psychiatric clinics after undergoing screening in Paper I. Children with both obesity and NDDs may have additional cognitive impairments and elevated psychiatric symptoms. Paper III found that neurodevelopmental problems in children with obesity are common even when formally diagnosed NDDs is not present. However, children with combined obesity and NDDs had higher risk for overlapping neurodevelopmental problems. Based on parent's descriptions in Paper IV, we identified seven stressors for children with obesity ranging from obesity treatment and medical interactions to family interactions around health issues. Various coping strategies were described, but passive coping may be common.

Conclusions: NDDs and neurodevelopmental problems are common in children undergoing treatment for obesity and require clinical attention to enable adequate support. A coping framework in paediatric obesity care may help promote active coping. Active coping has been associated with better health outcomes in other paediatric chronic conditions.

Keywords: Childhood obesity, ADHD, Autism, Cognitive functioning, Neurodevelopmental problems, ESSENCE, coping