

ESSENCE: Child and Adult Studies of Verbal and Nonverbal Skills in ASD and ADHD

Bibbi Hagberg

Gillberg Neuropsychiatry Centre, Institute of Neuroscience and Physiology,
Sahlgrenska Academy at University of Gothenburg, Sweden

ABSTRACT

Aim: Longitudinal analysis of verbal and nonverbal deficits and skills and their contribution to clinical presentation in children and adults with ESSENCE/Early Symptomatic Syndromes Eliciting Neurodevelopmental Clinical Examinations. **Methods:** Forty school children with autism spectrum disorder (ASD) or attention-deficit/hyperactivity disorder (ADHD) or both were contrasted with 21 similarly aged children from the community who had screened positive for language disorder (LD) at 30 months. Also, 69 young adult males with ASD (Asperger syndrome) were followed longitudinally - neuropsychologically, psychiatrically and according to self/parent report - for an average of almost 10 years. **Results:** Clinic children with ASD and/or ADHD and community children with early LD had very similar verbal/nonverbal test and developmental profiles. Retelling of a story was linked both to verbal and nonverbal factors in the collapsed group with ADHD/ASD/LD. Nonverbal learning problems, persisting from childhood to adult age, in ASD, was associated with reduced tested and perceived executive functioning (EF). Good and superior verbal skills predicted better EF even in the presence of less good nonverbal skills. **Conclusion:** Young school age children seen in clinics with ASD/ADHD have almost identical verbal and nonverbal test profiles and problems as those screening positive for LD already at 2.5 years. Narrative skills at young school age was linked both to verbal and nonverbal test results. Boys with ASD (Asperger syndrome) become men with ASD, and their functioning in adulthood is linked to verbal skills and nonverbal deficits in childhood. – These longitudinal studies demonstrate the importance of full neuropsychological and psychiatric assessments in ESSENCE. These conditions are often lifelong. Many of them should be recognisable or at least broadly categorisable as ESSENCE already at 2.5 years. Follow-up assessment, both in school and in young adult age, is clearly important. Realistic prognosis and individual intervention plans based on such assessments are needed in ESSENCE.

Keywords: ESSENCE, neuropsychology, autism spectrum disorder, Asperger syndrome, ADHD, nonverbal learning disability, children, adults

Correspondence: bibbi.hagberg@gnc.gu.se

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Bibbi Hagberg

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- I. Hagberg, B., Miniscalco, C., Gillberg, C. Clinic attenders with autism or attention-deficit/hyperactivity disorder: cognitive profile at school age and its relationship to preschool indicators of language delay. *Research in Developmental Disabilities*, 2010; 31:1-8.
- II. Åsberg Johnels, J., Hagberg, B., Gillberg, C., Miniscalco, C. Narrative retelling in children with neurodevelopmental disorders: Is there a role for non-verbal temporal-sequencing skills? *Scandinavian Journal of Psychology*, 2013; 20: 121-133.
- III. Hagberg, B.S., Nydén, A., Cederlund, M., Gillberg, C. Asperger syndrome and “non-verbal learning problems” in a longitudinal perspective: neuropsychological and social adaptive outcome in early adult life. *Psychiatry Research*, 2013; Epub ahead of print.
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Handledare: Professor Christopher Gillberg
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