# Speech, Language and Communicative Ability in School-Aged Children with Cerebral Palsy and Speech Impairment

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av

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Avhandlingen baseras på följande delarbeten:

I. Nordberg A., Miniscalco C., Lohmander A., & Himmelmann, K. (2013). Speech problems affect more than one in two children with cerebral palsy: Swedish population-based study. *Acta Paediatrica*, *102*, 161-166.

II. Nordberg A., Miniscalco C., & Lohmander A. (2014). Consonant production and overall speech characteristics in school-aged children with cerebral palsy and speech impairment. *International Journal of Speech-Language Pathology*, *16*, 386-395 (Invited Article, Special Issue Childhood Dysarthria).

III. Nordberg A., Dahlgren Sandberg A., & Miniscalco C. (2015). Story retelling and language ability in school-aged children with cerebral palsy and speech impairment. *International Journal of Language & Communication Disorders*. Published online: 27 July 2015.

IV. Nordberg A., Miniscalco C., Lohmander A., & Himmelmann, K. (2015). Perspectives of communicative ability in children with cerebral palsy and speech impairment. (Submitted).

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## Abstract:

The overall aim of this thesis was to explore and describe speech, language and communicative ability in school-aged children with cerebral palsy (CP) and speech impairment. The medical records of a population-based cohort of 129 children with CP born 1999–2002 in western Sweden were reviewed. Type of CP, motor functions and neuroimaging findings were analysed.

Twenty-seven (21%) of the 129 children had speech impairment. Twenty-two (82%) of the 27 children took part in an assessment of speech, language, and communication skills. Consonant production, dysarthria, hypernasality and oral narratives were assessed. The children's, the parents', the teachers' and the SLP's opinions about the children's communicative ability were also analysed.

More than half of the children had severe problems with articulation of oral consonants. Speech production and non-verbal cognitive level correlated significantly and severe retelling ability problems occurred. Language ability and auditory memory correlated significantly with retelling ability. The children were mostly positive about their own communication. Parents and teachers rated them as having marked general communicative impairments. Parents' and SLP's ratings correlated significantly, whereas the parents and the teachers ratings did not.

A comprehensive speech, language and communication test battery in which standardised tests are included is suggested for children with CP and speech impairment. The children's own opinions and those of the key persons around them are also important to consider when planning intervention.

Keywords: cerebral palsy, children, epidemiology, neuroimaging, narrative ability, communicative ability, dysarthria, consonant articulation

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