Phonological patterns in Cri du Chat Syndrome

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Cri du Chat Syndrome (CDCS) is a genetic disorder associated with a deletion on the short arm of chromosome 5. Clinical features include mental retardation as well as motor problems. Individuals with CDCS also experience articulation problems to a varying degree, see e.g. Kristoffersen (2004; 2008), reducing intelligibility in many cases.

Vihman & Velleman (2000) suggest that typically developing children acquire the phonology of their ambient language by making phonological generalisations over known words, resulting in so-called templates. The children use the templates to select the words they attempt at. Other words that do not fit the template may be adapted to fit the template. For example, the typically developing child Iben (1;5) learning Norwegian prefers CVCV(CV) words that start with a labial, and the words baby, banan ’banana’ and pasta are among her selected words. She adapts words to this labial template when she produces eple 'apple’ as [ˈbæ] and søpla ‘the rubbish bin’ as [pø læ].

After a while, typically developing children will start to produce more words more accurately, and rely less on whole word patterns. Late talkers, however, seem to rely on templates longer than typically developing children. In addition, they typically also have smaller consonant inventories and higher vowel to consonant ratio (Keren-Portnoy et al. (2008), Vihman et al (submitted)). Vihman et al (submitted) conclude that “dependence on templates, or holistic, routinized matches to target, appears to be a useful ‘holding strategy’ at an early age but a negative indicator when it continues to be functional at considerably later ages”.

We have analysed data from an elicitation task given to seven children with CDCS learning Norwegian, six monolinguals and one bilingual, aged 5;4 – 12;3, and have found that several of them appear to use templates. We focus on the characteristic features of these templates, compare them to the types of templates found in typically developing children, and relate them to the measure of Percent Consonants Correct, which may indicate the level of stable consonants.

References


Vihman, Marilyn, Tamar Keren-Portnoy, A. Bidgood, M. McGillion & C. Whitaker (submitted). Late talking toddlers: Relating early phonological development to later language advance.