

Initial cluster realizations in German-speaking children with speech sound disorders

Most children with speech sound disorders (SSD) show difficulties in producing initial consonant clusters (CC). Chin & Dinnsen (1992) compared developmental CC realizations of English-speaking children with speech sound disorders (SSD) with those of typically developing (TD) children. Their findings indicate that children with SSD do not differ from TD children in their CC realizations patterns. Rvachew, Leroux & Brosseau-Lapr  (2014) contradicted those results in demonstrating that their francophone children with SSD behaved differently in comparison to TD children and further showed quantitatively and qualitatively different realization patterns as described for English-speaking children. However, both studies as well as the group study by McLeod et al. (1997) conducted a fairly broad analysis of the clusters, e.g. investigating different reduction /substitution pattern independent of the CC types (e.g. not fully differentiating /s/-CC versus non-/s/-CC). Therefore, even though it was demonstrated that the described patterns generally occur in TD developing children, it was mainly disregarded that specific patterns only occur with specific CCs. In addition, CC realizations were evaluated outside the context of the word, the children's phonemic inventories or the child's patterns of word onset realization. Thus, e.g. assimilations within the word or general onset pattern were not acknowledged. Therefore, the present cross-sectional study aimed to investigate the CC realizations of German-speaking children with SSD in comparison to TD children considering a large range of linguistic aspects/types of analysis.

The data of 276 children aged 2;08-6;07 with SSD were compared to data of 467 TD children aged 2;00-4;11. The age of the TD children represents the critical age range of CC acquisition in German (Fox-Boyer, 2015). All children were monolingual German-speaking and were assessed with the same picture naming test. The data of the TD children provide information about the typical age and the order of CC acquisition as well as typical realization patterns per cluster and were used to compare patterns across both groups/patterns between the TD and SSD group. The data of the children with SSD were analyzed for every child individually. The following aspects were investigated: CCs affected, type of realization per CC, i.e. constituent affected and way of realization, production of singletons affected in CCs, assimilation processes within words and realization of syllable shapes of word onsets across all test items.

Results indicated that children with SSD showed three patterns of cluster realization: firstly, they produced age-appropriate clusters and secondly they showed simplification patterns (CC reduction or substitution) similar to those of TD children at a younger age.

In addition, atypical realizations were observed, i.e. realizations which are not found in TD children of any age: a) deletion, b) arbitrary sounds used to mark CC positions, c) atypical substitutions pattern and d) general word onset substitutions. It will thus be argued that an

analysis on CC level only might be insufficient in order to interpret and explain a child's speech pattern.

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