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Poster (Abstract):

### **A new tool to test the perception of the phonemes relevant for German verb-morphology**

Johannes Hennies<sup>1</sup>, Martina Penke<sup>2</sup>, Monika Rothweiler<sup>3</sup>, Eva Wimmer<sup>2,3</sup>, Markus Hess<sup>1</sup>

<sup>1</sup>*University Medical Center Hamburg-Eppendorf, Germany*

<sup>2</sup>*University of Cologne, Germany*

<sup>3</sup>*University of Bremen, Germany*

#### **Research question**

Assessment of hearing properties plays a crucial role for therapeutic intervention and fine-tuning of hearing aids in children with hearing impairment. We report findings of a study aiming at the development of a German hearing test which – in contrast to currently used speech perception tests – concentrates on the perception of consonants in the offset of a syllable that mark agreement morphology in German.

#### **Method**

15 hearing impaired (HI) and 14 typically developing children (TD) (age three and four) listened to nouns presented with 65 dB. They had to choose out of three pictures (a minimal pair and a distractor) the one matching the word. The minimal pairs (n = 11) were discriminated by one phoneme (/s/, /t/, or /n/) in the offsets of both words (e.g. /hu:n/ = *Huhn* ‘chicken’ vs. /hu:t/ = *Hut* ‘hat’).

#### **Results**

The HI children achieved low correctness scores, did not choose above chance between test item and phonological distractor and did not improve with age in contrast to the TD children. A significant correlation is found between the number of choices of phonological distractors and the unaided hearing threshold at 2000Hz and 4000Hz, the main frequency ranges for the production of the phonemes /s/ and /t/.

#### **Conclusion**

These findings indicate that critical phonemes in the syllabic offset are difficult to discriminate and to acquire for HI children. Results of a production experiment furthermore suggest that these difficulties affect the acquisition of German verb morphology.