The acquisition of finite verb morphology in hearing impaired children

Eva Wimmer\textsuperscript{1,2}, Martina Penke\textsuperscript{2}, Johannes Hennies\textsuperscript{1,3}, Monika Rothweiler\textsuperscript{1}, Markus Hess\textsuperscript{3}

Introduction

Children with hearing impairment

- to date little is known about language acquisition in children with permanent hearing impairment (HI)
- intact hearing is important for an unimpaired language acquisition
- HI children have only restricted access to spoken language input during the 'critical' years for acquisition - despite modern hearing aids

Deficits in language acquisition are expected

Phoneme perception difficulties due to HI

- concomitant consonants like /r/ and /l/ are more difficult to perceive than nasals
- errors are more pronounce in HI

Subject-verb-agreement in German

The concomitant /s/, /t/ and /n/ are subject-verb-agreement in German

Aims of the study

- Do children with moderate HI have deficits in the acquisition of verb morphology?
- How are specific speech sounds processed by HI children?

Method

Video description task

- METHOD: Elicitation task: description of action depicted in 30 short silent video scenes
  - actions performed by a single child, two children or investigator
  - target: Do lachen (laughing)

Video task: Obligatory context analysis

- Correct responses for the different verbal affixes
  - HI children: significantly more errors in contexts for verb forms on -\textit{t} and -\textit{r} in TD children

Video task: Analysis of occurrence

- correct use of -\textit{s} and -\textit{t}

Picture naming task

- method: naming of objects on picture cards
  - target nouns: simple nouns, stems ending in /\textit{n/}, /\textit{t/}, /\textit{r/}, /\textit{m/}

Results

Video task: correctness scores

- HI children: significantly more agreement errors (omissions and substitutions) than TD children

Picture naming task: correctness scores

- HI children: significantly more incorrect realizations of target nouns than TD children

Comparison of results in both tasks

- Parallel performance pattern in both tasks: significant difference in correctness scores between words ending in /\textit{n/} and /\textit{r/} in HI children

Discussion

- Have HI children acquired the subject-verb-agreement system? Yes!
- Is there a correspondence between errors in the video description task where the phonemes /\textit{s}/ and /\textit{t/} function as agreement markers and the picture naming task where they do not carry morphophonological content? Yes!

Conclusion

- The data indicate that the production of inflectional morphology is selectively affected in German children with moderate HI.
- The observed agreement errors are not due to a deficit in acquiring the morphosyntactic content expressed by inflectional affixes, but due to problems in perceiving and processing the relevant phonemes used as inflectional affixes.

Error types produced by HI children in video description and naming task

- Majority of errors in HI children: omissions of phonemes /\textit{s}/ and /\textit{t/} in both tasks.

References


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