

The Role of Talk in Outcomes of Children with Hearing Loss

Sophie E. Ambrose

Mark VanDam

Mary Pat Moeller

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Outcomes of Children with Hearing Loss
a study of children ages birth to six

Research Questions

- Do the auditory environments of children with mild to severe hearing loss (HL) differ from the auditory environments of children with normal hearing (NH)?
- Do children with HL vocalize less frequently or participate in less turn-taking interactions than their peers with NH?
- Do adult word count, child vocalization count, or conversational turn-taking account for variance in the receptive and expressive language abilities of children with hearing loss?

Study Design

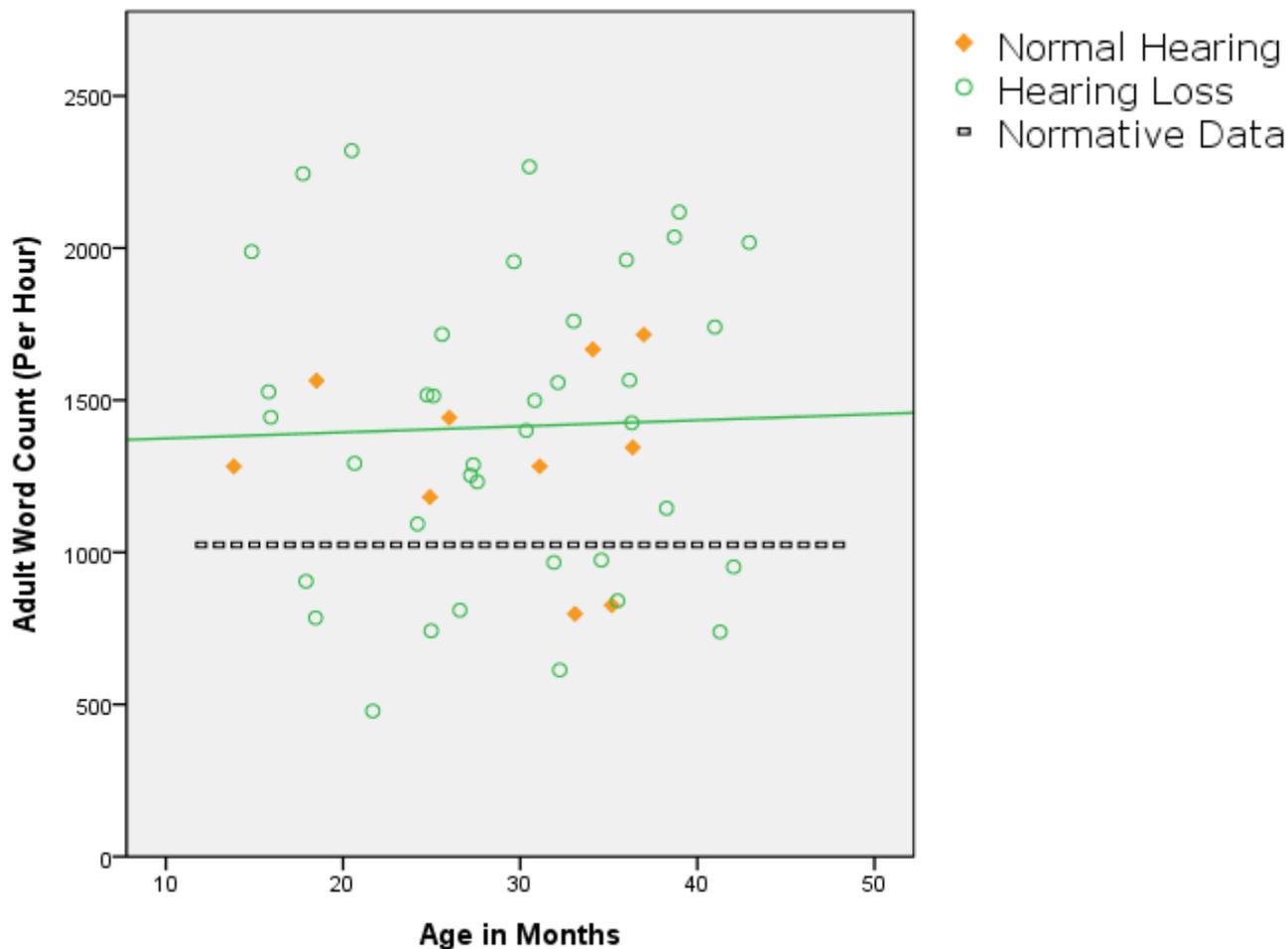
○ Subjects

- 38 children with **mild to severe hearing loss** (HL Group)
- 10 children with normal hearing (NH Group)

○ Design

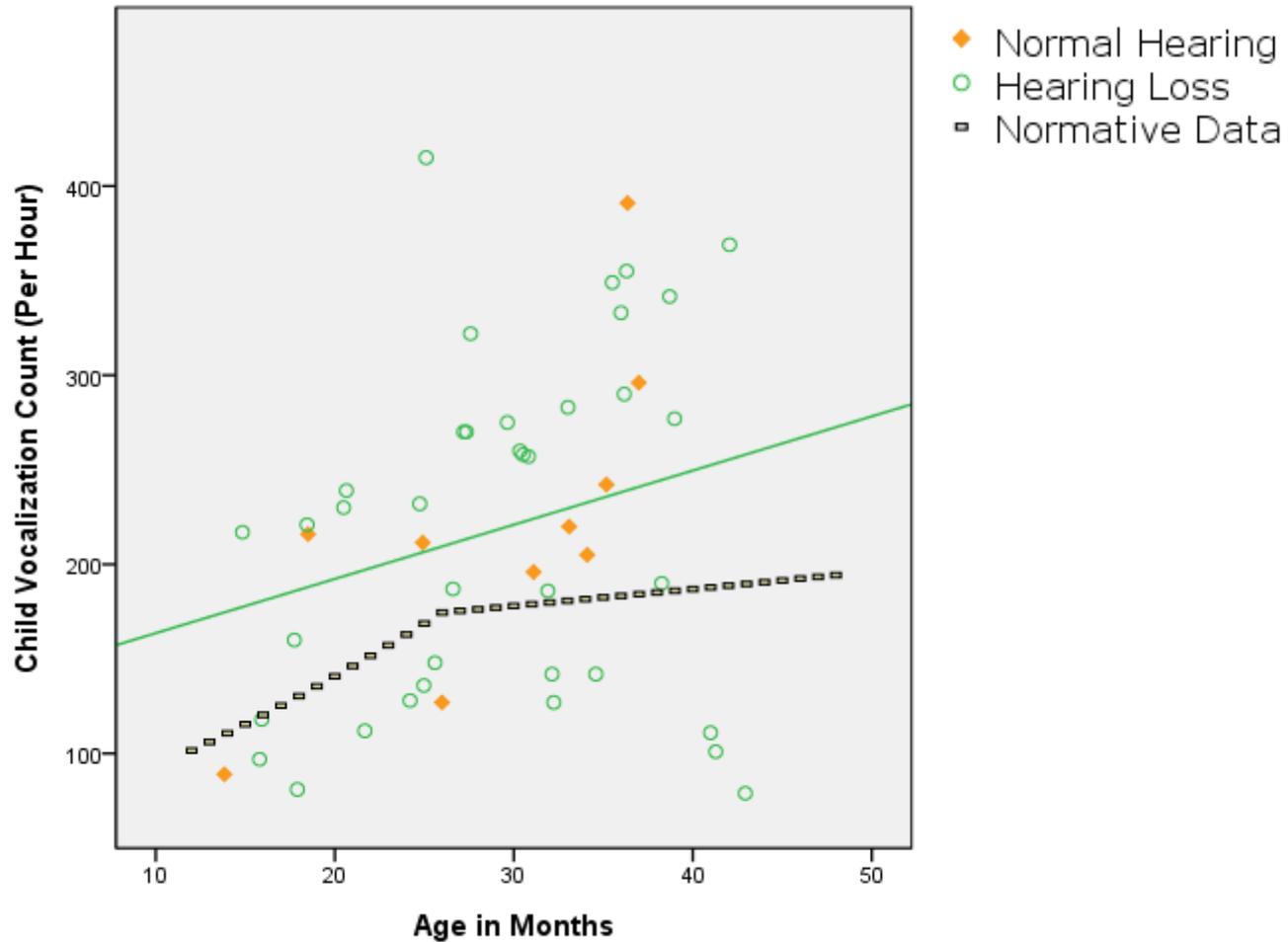
- Enrolled between 12 and 36 months of age
- One recording per month for 12 months
- Outcome measures collected at age milestones

Adults talk similarly to children with HL and children with NH

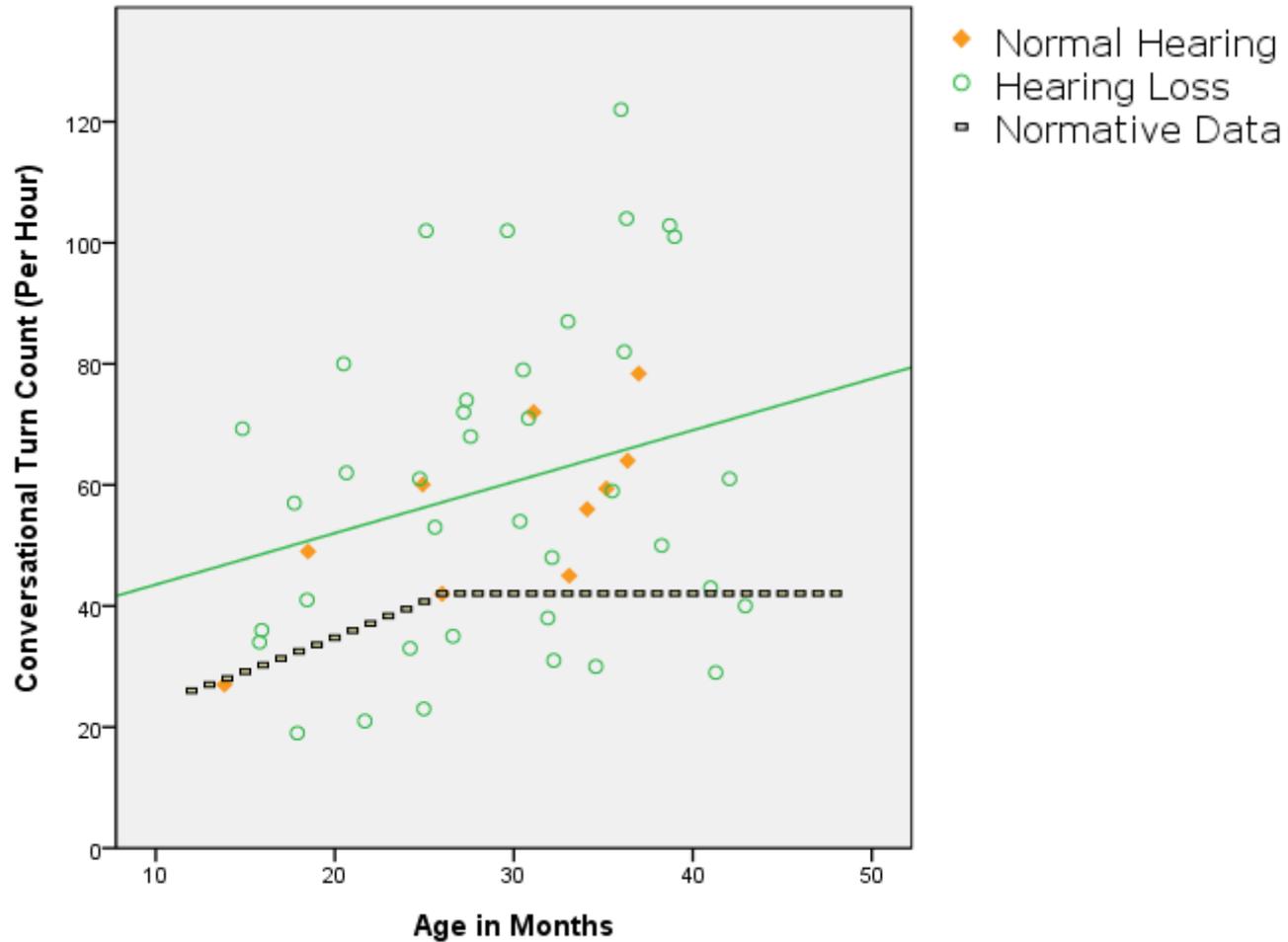


Other auditory input in the environment is similar too.

Children with HL do NOT vocalize less than children with NH

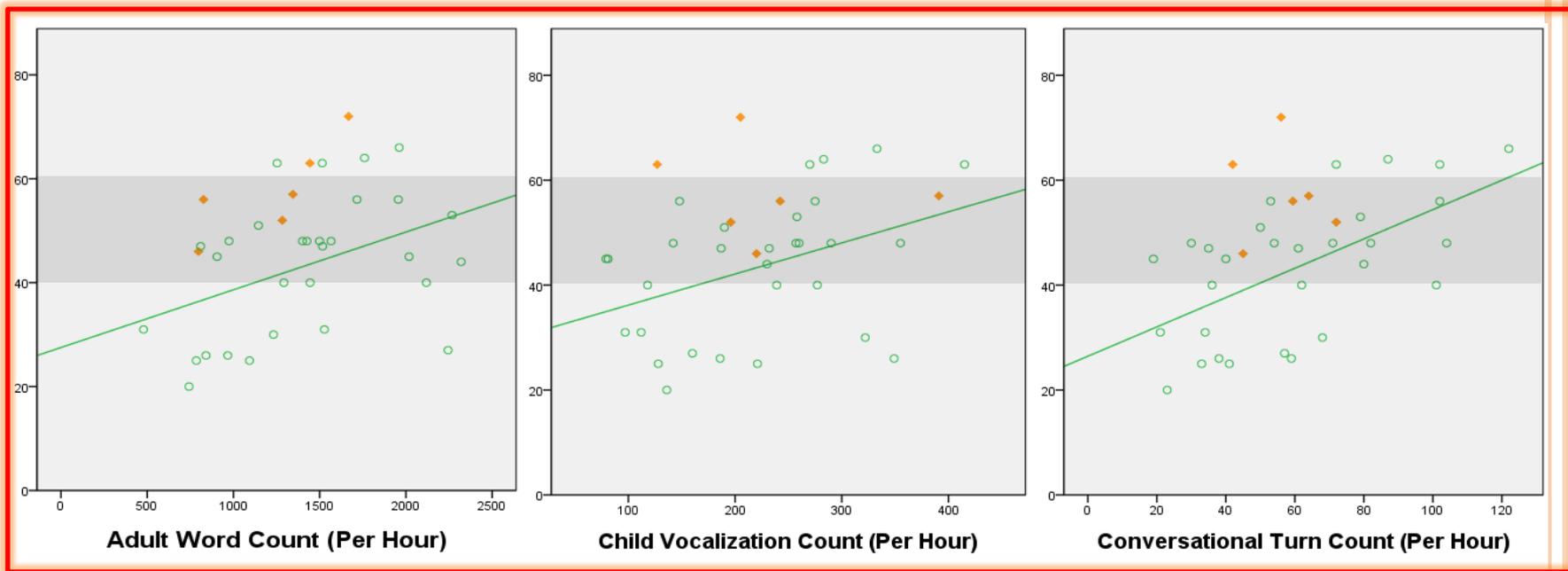


Children with HL do NOT participate in fewer conversational turns than children with NH



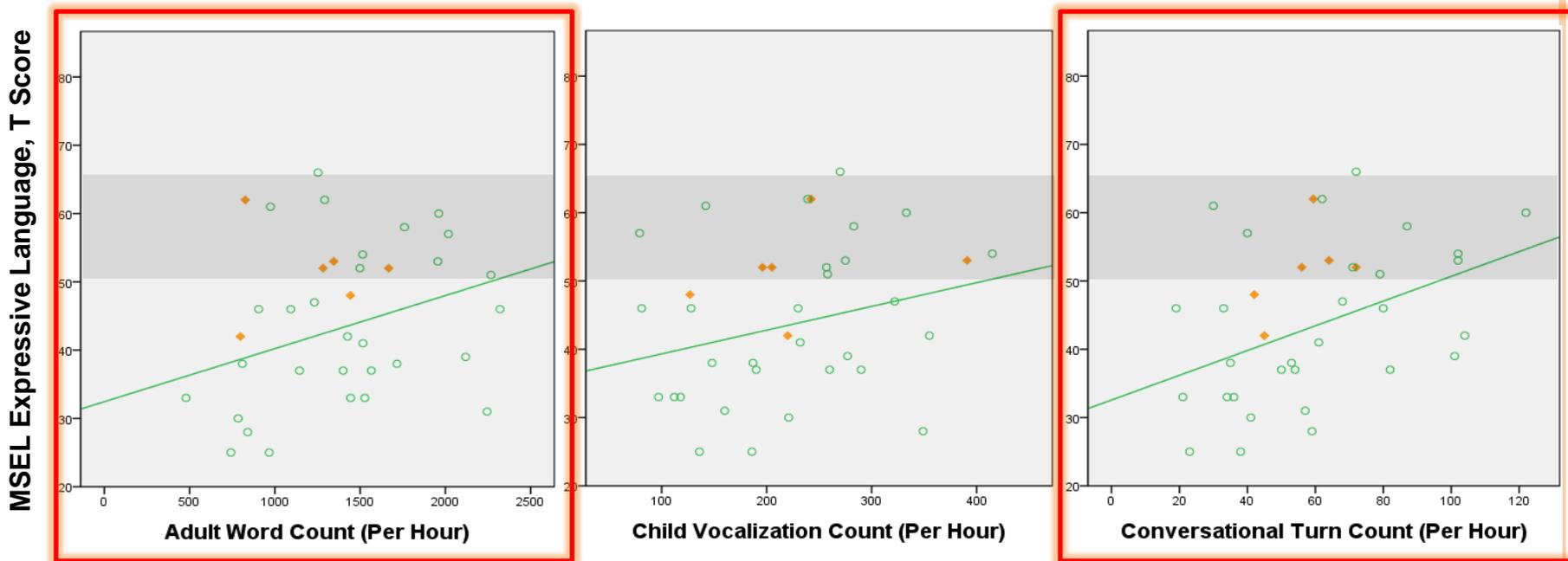
For children with **HL**, **receptive** language was significantly correlated with adult word count, child vocalizations, and conversational turns.

MSEL Receptive Language, T Score



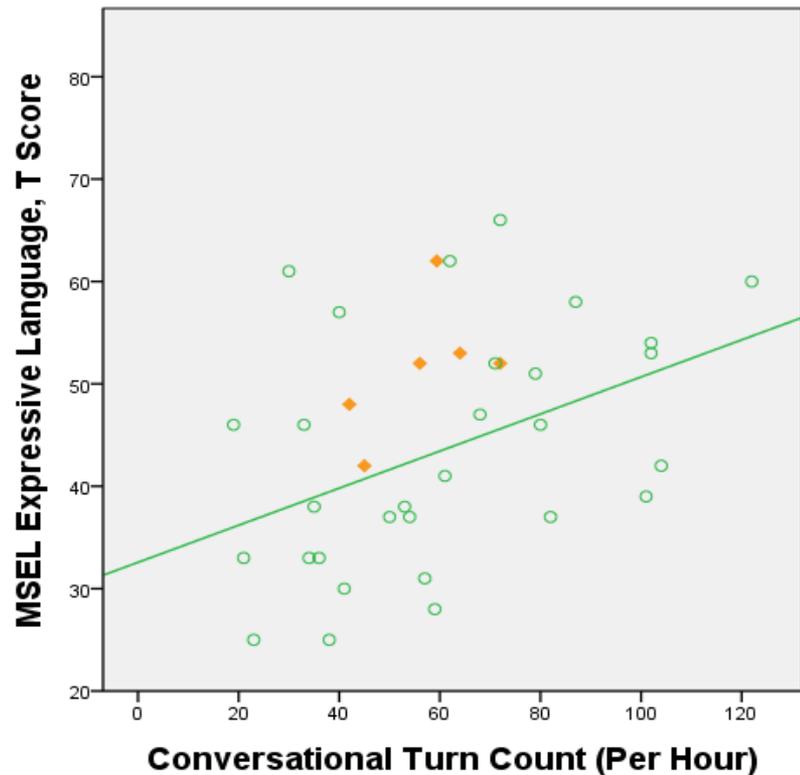
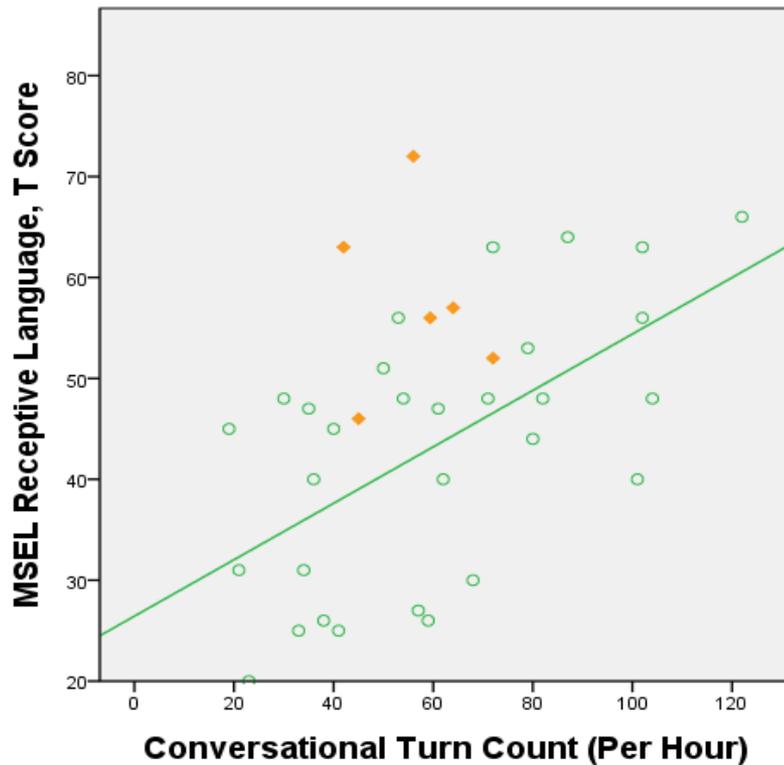
- ◆ Normal Hearing
- Hearing Loss

For children with **HL**, **expressive** language was significantly correlated with adult word count and conversational turns.



◆ Normal Hearing
○ Hearing Loss

Only **conversational turns** accounted for unique variance in children's receptive and expressive language scores (36% and 18% respectively).



Take-Home Message

- Children with HL and NH:
 - Are exposed to a similar amount of language
 - Produce a similar number of vocalizations
 - Participate in a similar number of conversational turns
- Conversational turns accounted for the largest portion of the variance in the receptive and expressive language scores of children with hearing loss.

Future Questions and Directions

- Influence of hearing loss related factors (e.g. degree and configuration of hearing loss, age at diagnosis and hearing aid fitting)
- Role of socioeconomic status
- Between group differences at various ages
- Relationships between automated measures and later linguistic and cognitive outcomes
 - At various ages

Acknowledgements

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 - Boys Town National Research Hospital
 - University of Iowa
 - University of North Carolina

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