

Auditory Skills of Toddlers With and Without Hearing Loss

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Objective

To compare the performance of 24-36 month olds with and without hearing loss on the Cincinnati Auditory Skills Checklist.

Introduction

Hearing loss is the most common congenital birth defect

- 2-3:1000 newborns¹

Universal Newborn Hearing Screenings (UNHS) paved the way for early identification (EI) of hearing loss

Goal of EI is to improve developmental competency among deaf/hard of hearing (DHH) children³

Effective EI requires tracking of auditory skill development of (DHH) children

The Cincinnati Auditory Skills Checklist (ASC) is one measure that may be used to identify the skill development of the DHH population⁴

- The ASC has not yet been used for children with other degrees of hearing loss or children with normal hearing

Methods

Subjects

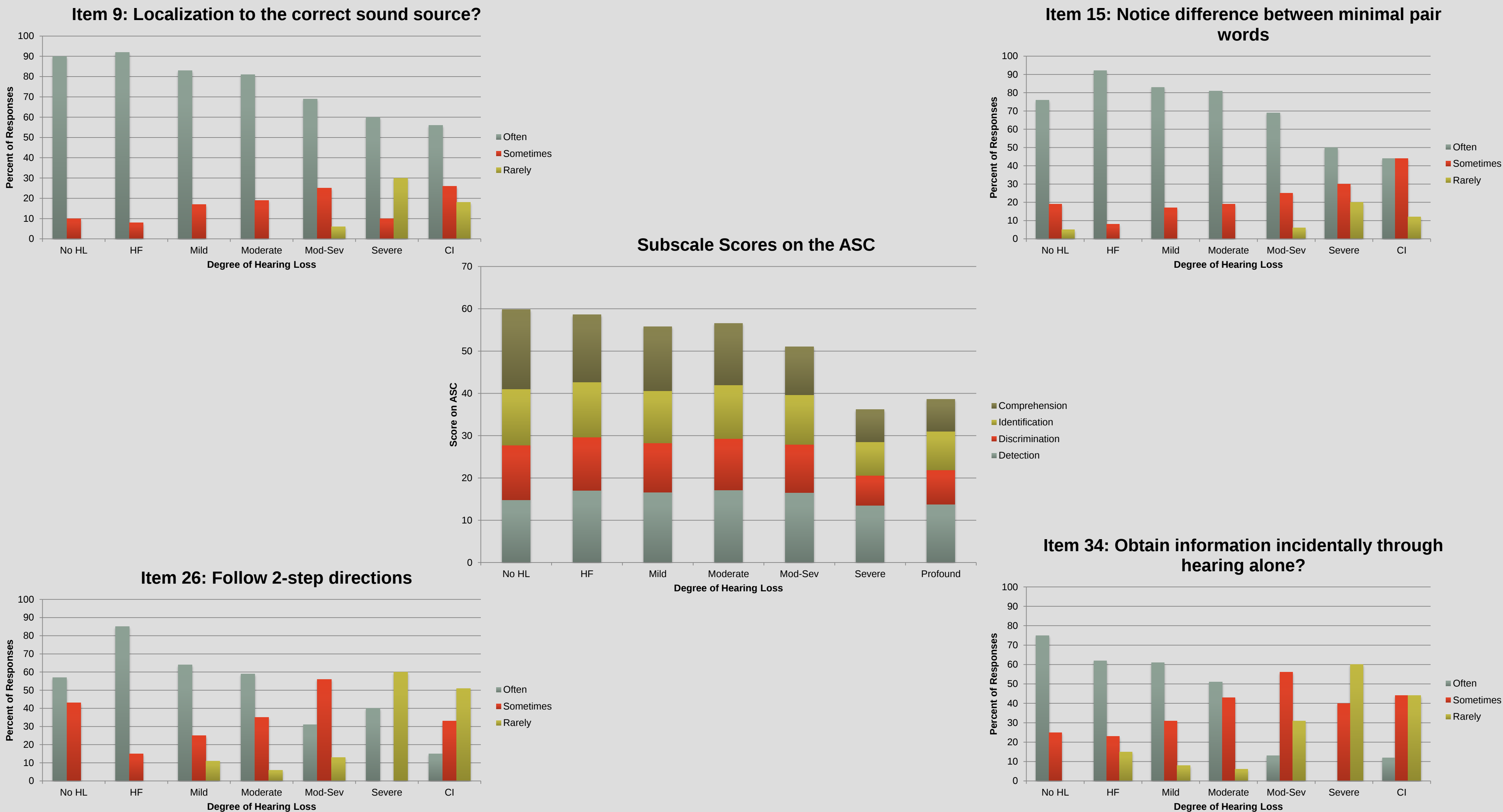
- 30 typically developing, normally hearing toddlers aged 24-36 months
- 200 cognitively typically toddlers with bilateral hearing loss ranging from high frequency to profound

Group	Number (n)
No hearing loss	30
High frequency	13
Mild	59
Moderate	63
Moderate-Severe	16
Severe	10
Cochlear Implant	39

Measures

- 35 ASC items fall into four distinct categories: Detection, Discrimination, Identification, and Comprehension
 - 0 = rarely
 - 1 = sometimes
 - 2 = often
- Developmental quotient calculated using MINN CDI:
 - $\frac{\text{Avg (SH + SC)}}{\text{CA}} \times 100$

Results



Conclusions

As degree of hearing loss increases, skill performance decreases

No HL – Mod-Sev HL: scores of 1 or 2

- May not be a developmentally sensitive instrument

Severe HL – CI: scores of 0 or 1

For many Comprehension items no group reached 80% mastery

With established norms, the ASC may be a good way to determine the efficacy of EI, guide EI programming, and help close the skill gap that currently exists along the spectrum of pediatric hearing impairment

Future Directions

Item-by-item comparative performance of DHH children:

- Degree of hearing loss
- Developmental Quotient
- Maternal Level of Education

Establish normative data for DHH groups

Key References

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