

Perceptual Coherence in Adults with Congenital and Acquired Hearing Losses

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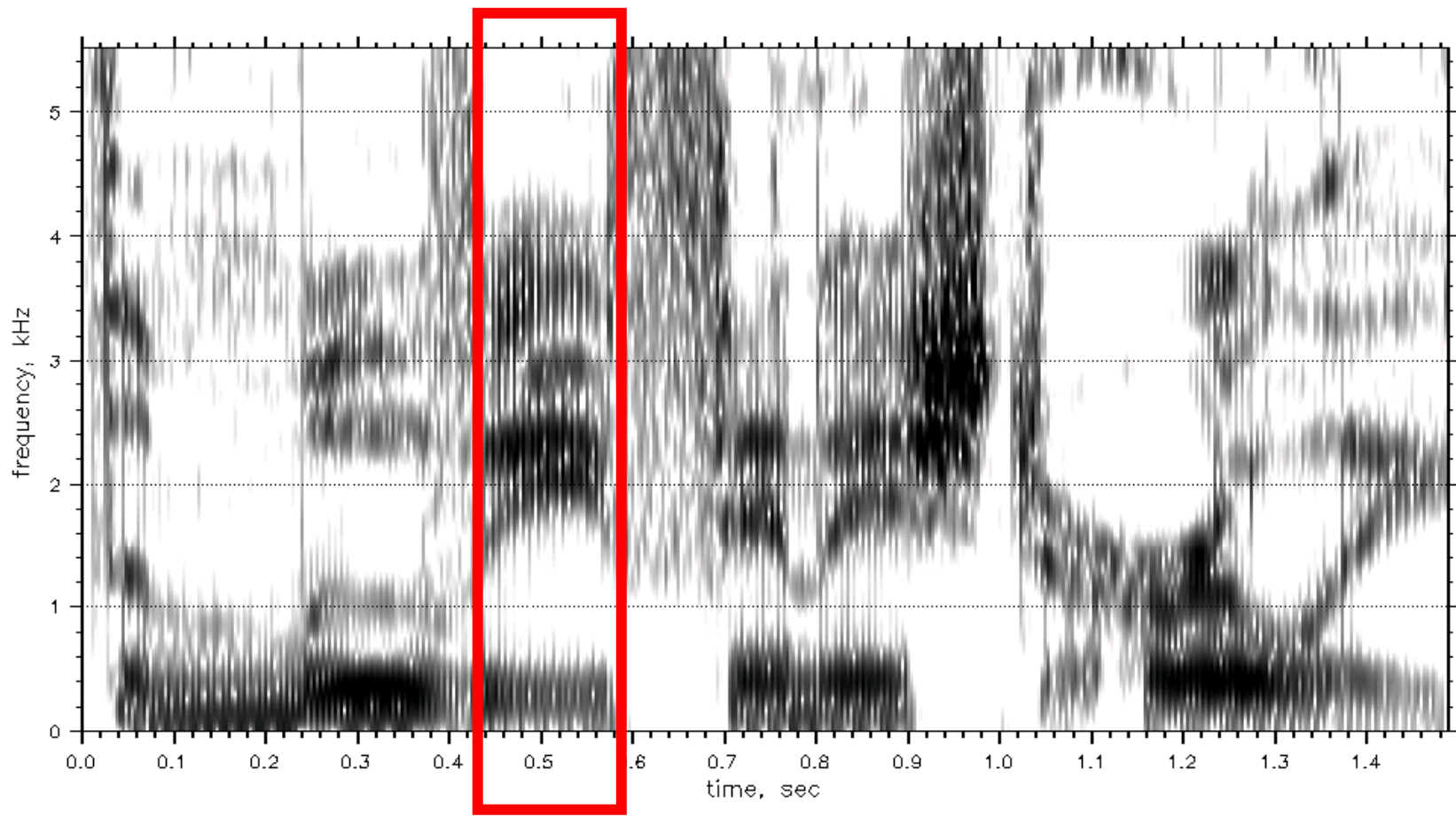


Introduction

Children with hearing loss eventually become adults with hearing loss.

Does impaired auditory processing in childhood extend into adulthood?

Perceptual Coherence



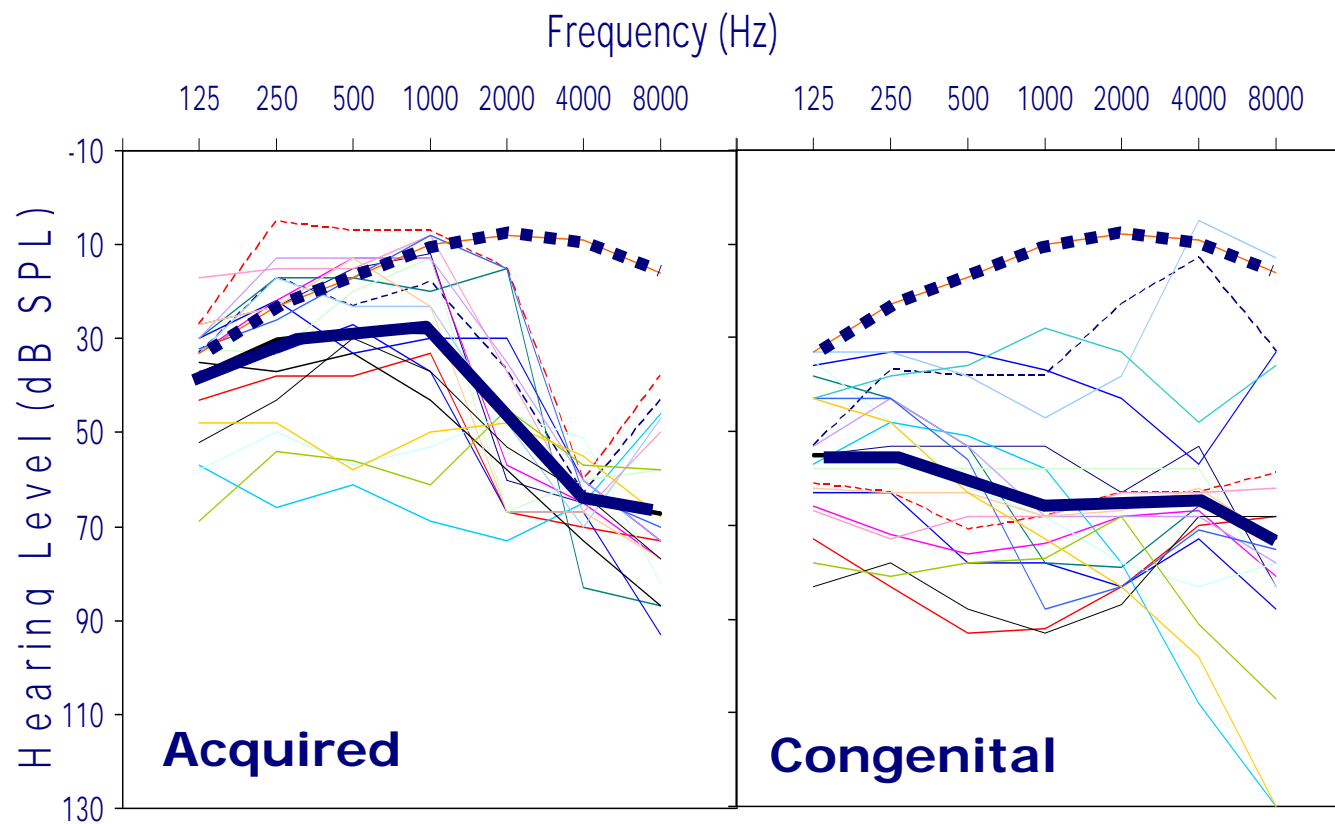


Purpose

- To examine perceptual coherence in adults with congenital hearing losses relative to adults with normal hearing and adults with acquired hearing losses.

Subjects

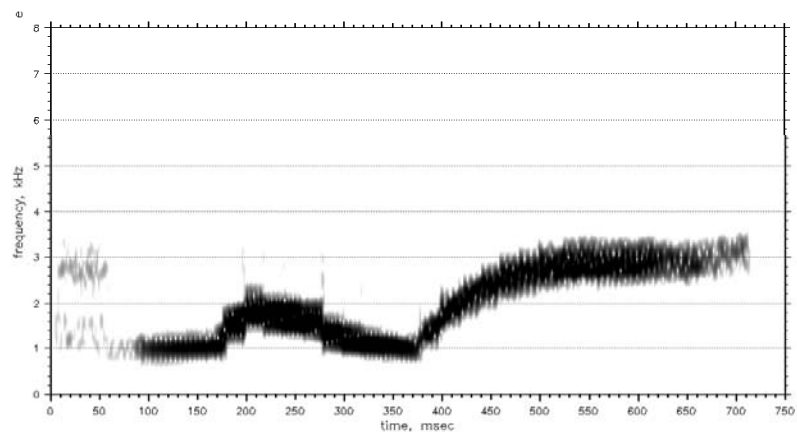
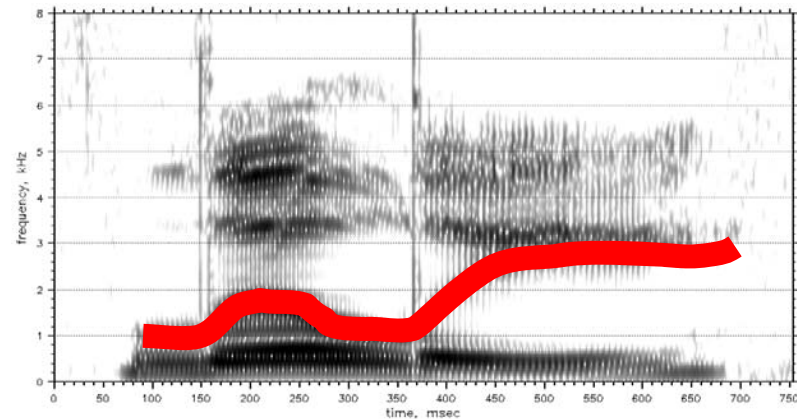
- 10 Normal hearing (mean age 25 years)
- 10 Acquired hearing losses (mean age 64 years)
- 10 Congenital hearing losses (mean age 34 years)



Stimuli

■ Speech

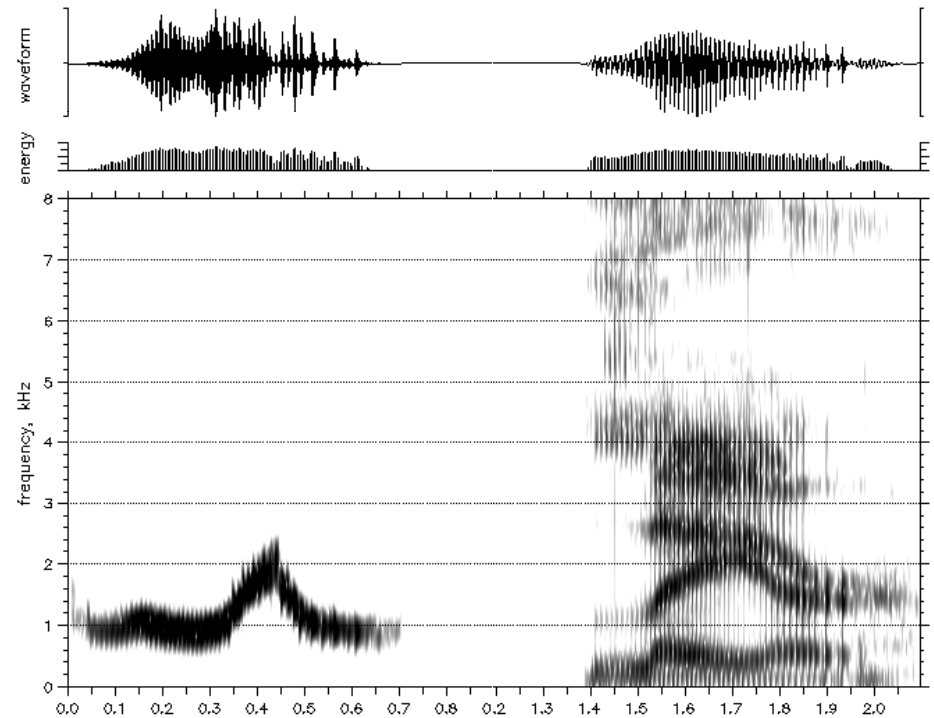
- 9 naturally produced words (sonorants)
- Produced by a male, female and child.



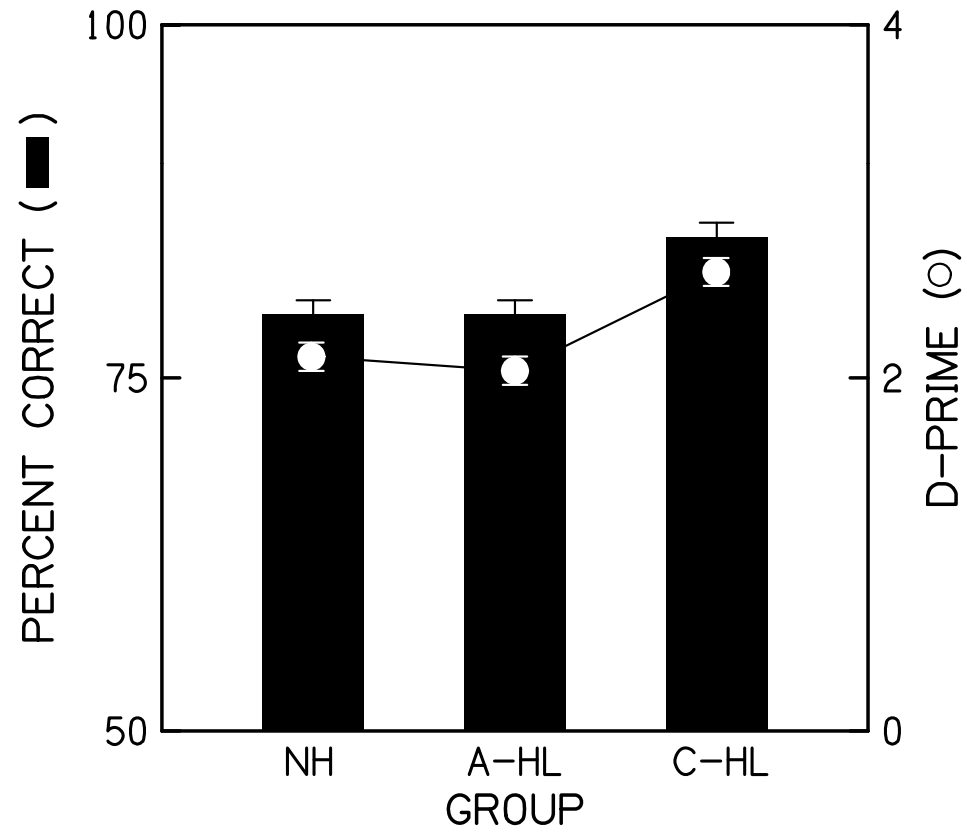
Paradigm

■ Yes/No

- Yes trial
 - F2 in the word
- No trial
 - F2 not in the word



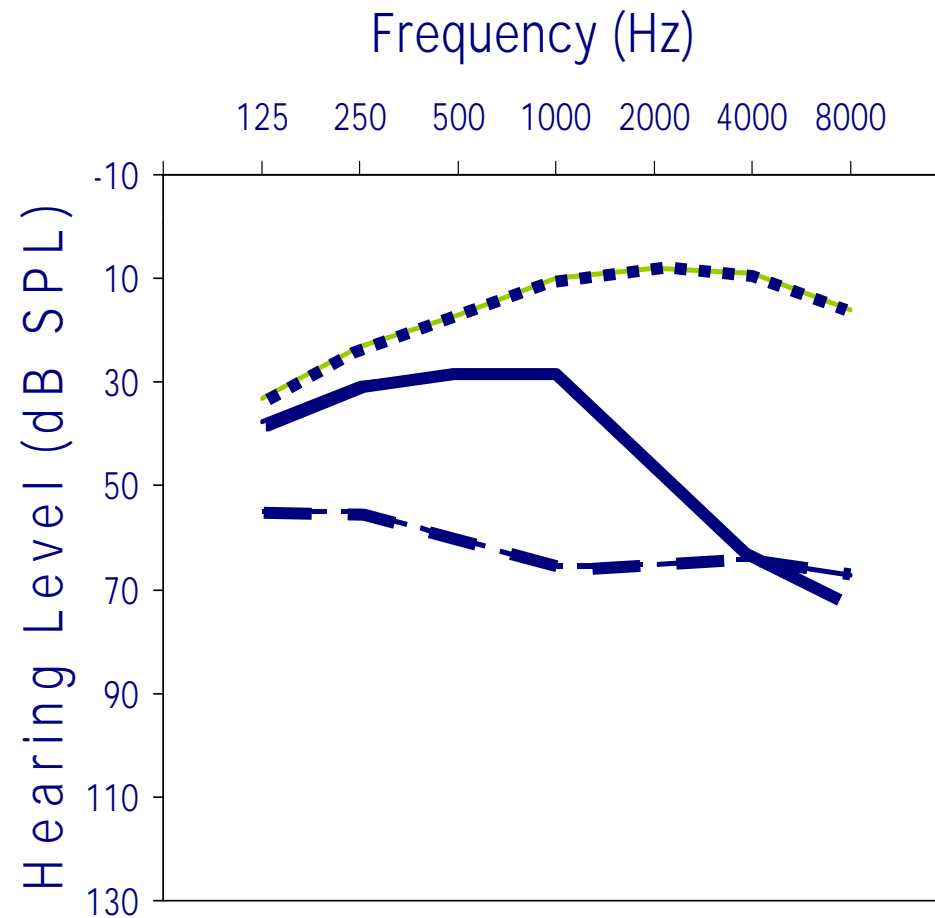
Results



Subjects

■ Adults

- Normal ·····
- Acquired ———
- Congenital - - -



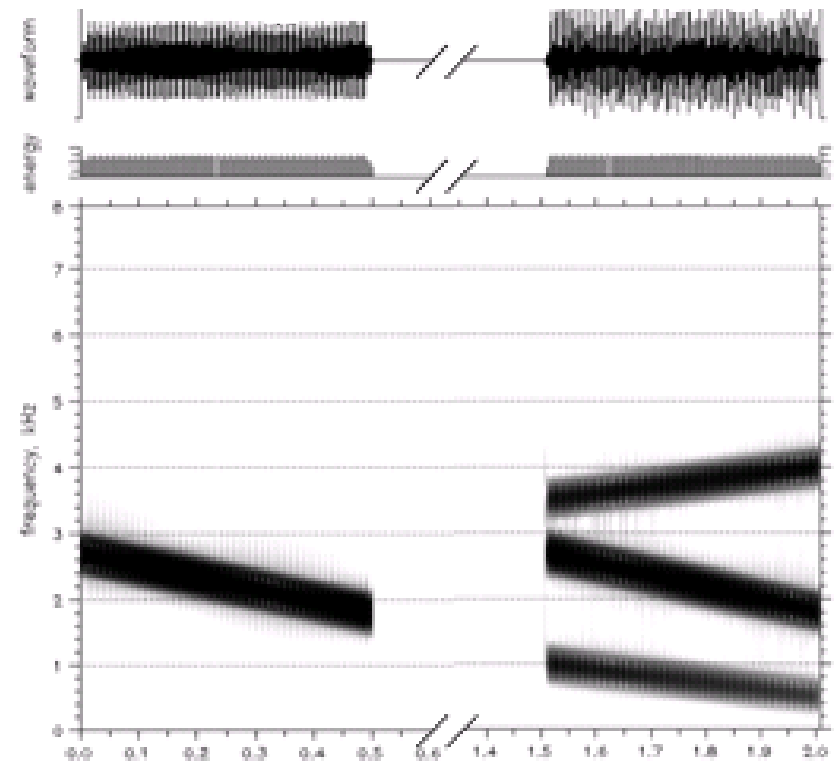
Paradigm

■ 5 3-tone Complexes

- Amp. modulated (100Hz)
- 50% duty cycle

■ Yes/No

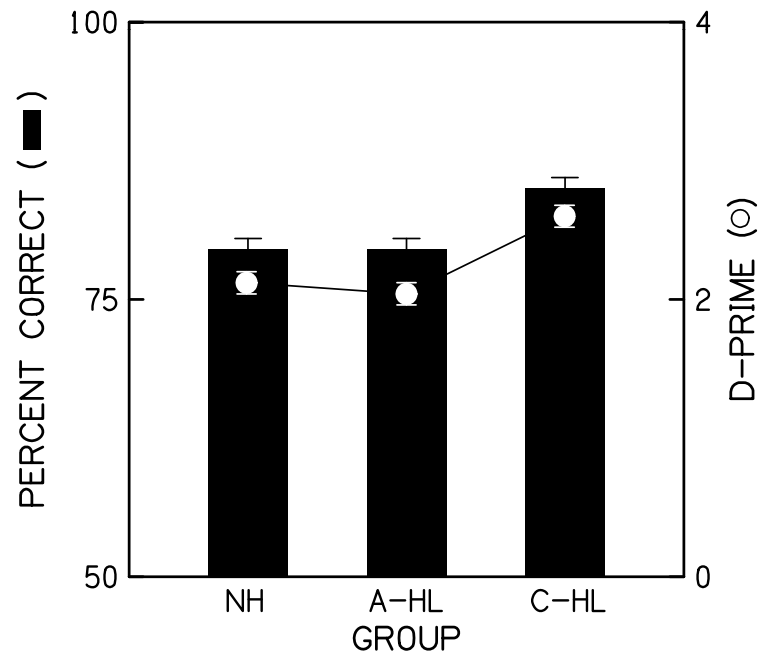
- Yes trial
 - F2 in complex
- No trial
 - F2 not in complex



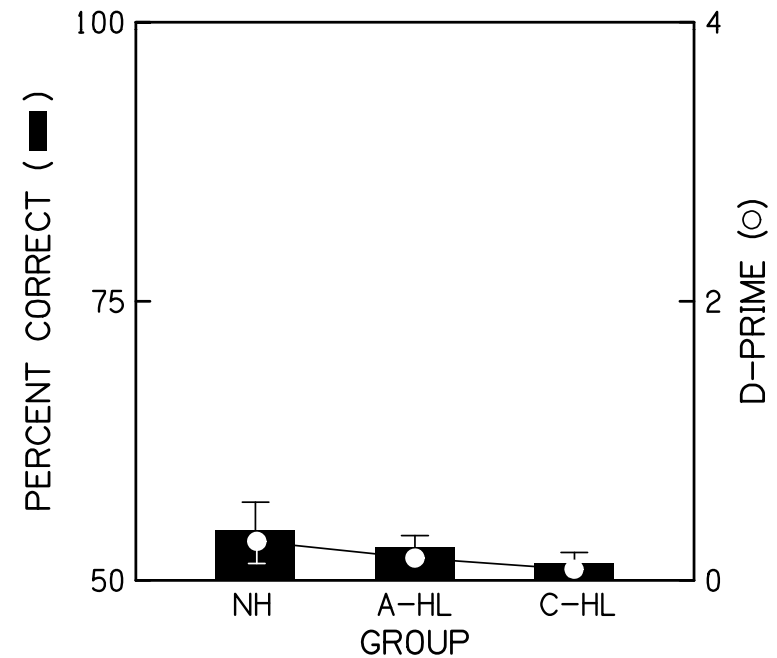
Results

■ three-tone complex

Speech



Tone Complexes





Conclusion

- Perceptual coherence was not affected by acquired hearing loss.
- Adults with congenital hearing losses demonstrated atypical perceptual coherence for speech.
- Practical consequences of poor perceptual coherence are largely unknown.
- Implications for research.