



MORPHOSYNTAX

in children with hearing loss



What we knew

Preschool children with hearing loss who use spoken language (CHL) are less productive than their peers with normal hearing (CNH) in expressive morphosyntax, or the use of grammatical morphemes when they speak.

What we wanted to know

Research Question #1

Does accuracy of CHL differ from CNH across specific grammatical morphemes?

Research Question #2

Are grammatical morpheme deficits for CHL related more to verb tense or speech perception?

What we did

Compared grammatical morpheme production of preschool CHL to CNH using 12-minute language samples. Language samples were coded for Brown's grammatical morphemes. To answer Research Question #1, accuracy on each morphosyntax unit was compared across groups. To answer Research Question #2, accuracy on three grammatical morphemes was compared within the CHL group to evaluate the extension of two theoretical accounts of morphosyntax impairment to this population.

Brown's Grammatical Morphemes

Bound Morphemes

Present progressive - I am jumping
 Regular plural - four dogs
 Possessive Inflection - my mom's car
 Regular past tense - I watched it before
 Regular third person singular - He runs

Free Morphemes

Preposition in - He dives *in* the ocean
 Preposition on - It is *on* the ground
 Articles - a dog, an apple, the house
 Irregular past tense - She *ran*
 Irregular third person singular - He *says* no
 Contractible copula - I *am* not home
 Uncontractible copula - We *were* home
 Contractible auxiliary - They're coming
 Uncontractible auxiliary - I *was* hoping for snow

Extended Optional Infinitive Theory

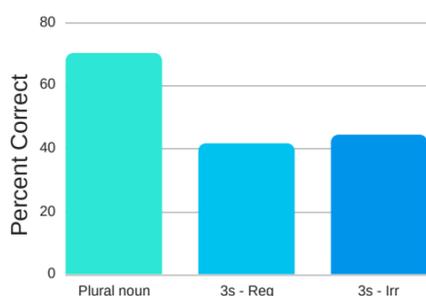
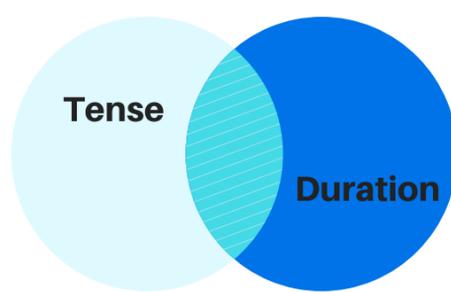
a period of extended non-marking of **verb tenses**. Non-marking of verb tenses is part of typical language development, but morphosyntax impairment involves a prolonged period (i.e., years longer).
 Ex: "She *jump* in the puddle" instead of "jumps"

Surface Account

difficulty with morphosyntax attributed to general perceptual processing limitation that is exacerbated by surface features (e.g., duration) of bound grammatical morphemes. Bound morphemes (Ex: cats, jumps, jumped) are often single sounds or unstressed unlengthened syllables (Ex: wanted, beaches).

What we found

1. Not only did CHL have lower MLU than CNH, but CHL also exhibited different order of accuracy on specific grammatical morphemes. CHL had particular difficulty with tense and short-duration morphemes.



2. Profiles of CHL supported a unified theoretical account of morphosyntax weakness in CHL in which both tense and duration of morphemes play a role in morphosyntax production accuracy. However, tense plays a more substantial role than duration in explaining the morphosyntax weaknesses in CHL.



What this tells us

These results are consistent with analyses of morphosyntax production in other clinical populations, pointing to a broadly based tense-marking deficit that is universal across populations as well as secondary population-specific deficits—in this case, speech perception-based deficits for CHL.

When SLPs select treatment targets for CHL, the accuracy data for CHL reported in this paper can be used as a guideline for selecting a developmentally appropriate order of intervention targets.

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