

CLERC
CENTER
AT GALLAUDET

The logo features the word "CLERC" in a large, white, sans-serif font. A stylized graphic element, consisting of three curved, overlapping shapes in red, orange, and blue, is positioned to the left of the "C" in "CLERC". Below "CLERC" is the word "CENTER" in a large, white, sans-serif font. At the bottom is the phrase "AT GALLAUDET" in a smaller, bold, yellow, sans-serif font.

Housekeeping

The Power of “**AND**” in Deaf Education Series

November 17, 2025

Dr. Wyatt Hall's
“*Language **AND**
the Brain*”



Today

Dr. Kaj Kraus and Dr.
Naomi Caselli's
“*Language Acquisition
AND Language
Learning*”

POLL

Families and educators often hear mixed messages, which leads them to ask important questions:

“Will my child learn spoken language?”

“Will learning sign language hurt spoken language development?”

“Should we focus on one language first before introducing another?”

“Can hearing parents successfully support sign language development?”

“Will using both sign language and spoken/written language confuse my child?”

“How do I know what is best for my child?”

Language Acquisition **AND** Language Learning



Dr. Kaj Kraus
Dr. Naomi Caselli
Deaf Center

The single greatest risk deaf people face is inadequate exposure to a usable first language. -Dr. Sanjay Gulati

Speech

Producing
sounds & signs

Pronunciation &
intelligibility

≠

Language

Understanding &
expressing
meaning

Vocabulary,
grammar, &
discourse

≠

Literacy

Understanding
& producing
texts

Reading,
spelling, writing,
composing

... **normal speech and language skills** were documented in 80% of [deaf and hard of hearing] children

(Geers, 2004)

... valuable evidence of the **outstanding Listening and Spoken Language ... outcomes** possible for infants and children with hearing loss

(Wolfe, 2019)

... developed **normal language** skills and at a rate that is **comparable to normal-hearing** children

(Ching et al., 2009)

... 87.78% of DHH children fell **below the 50th percentile** for vocabulary

(Campbell & Bergelson, 2022)

... **lack of pre-implant predictors** of outcomes

(Pisoni et al., 2017)

... **enormous variability** in auditory, speech, and language functioning after implantation

(Kral et al., 2016)

Many studies emphasize optimistic findings, or focus on specific questions like:

- Are CIs better than nothing? Better than HAs?
- Are kids doing well for their “hearing age” (instead of actual age)?
- How many kids are in the average range (instead of how many are below average)?

These approaches **obscure** the central question:
are deaf and hard of hearing children developing
age-expected language skills?



Dr. Wyatt Hall



Dr. Matt Hall

Are deaf and hard of
hearing children
developing age-expected
**spoken language
abilities?**



PART 1

PAGES 10-59

The first part of this paper will summarize the findings of several landmark research studies including:

PAGE 11

The Australian Longitudinal Outcomes of Children with Hearing Impairment (LOCHI) Study

PAGE 44

The Multi-Center Outcomes of Children with Hearing Loss Study

PAGE 53

The Childhood Development after Cochlear Implantation (CDaCI) Study

Overview of the Studies

CDaCI



38 publications

- 13 with language outcomes

OCHL



97 publications

- 28 with language outcomes

ODDACE/NECAP



7 publications

- 5 with language outcomes

Overview of the Studies

CDaCI



188 deaf children who received CIs

OCHL



317 hard of hearing children; almost all used HAs (no CIs)

ODDACE/NECAP



448 deaf and hard of hearing children who use HAs, CIs, and/or BAHAs

The majority of participants in all three studies were **monolingual spoken language users**.

Overview of the Studies

CDaCI



Earliest cohort

- Enrolled 2002-2004

OCHL



Later cohort

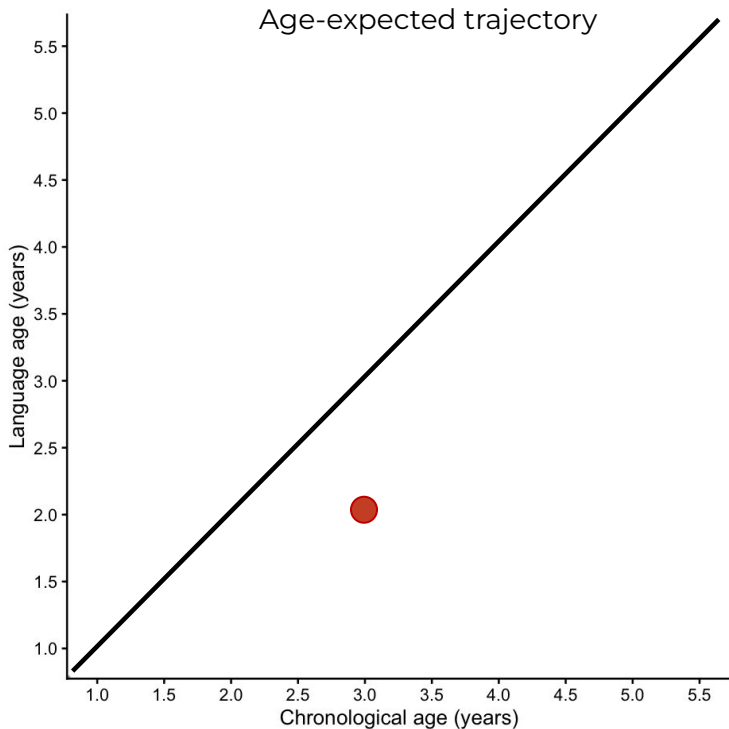
- Began enrollment 2008

ODDACE/NECAP



Most recent

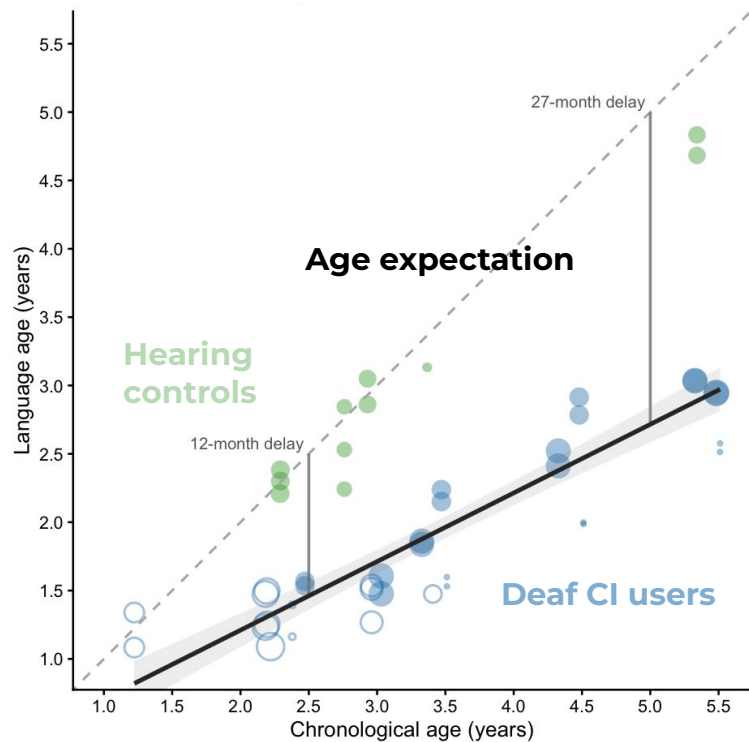
- NECAP 2012-2018
- ODDACE 2020-2024



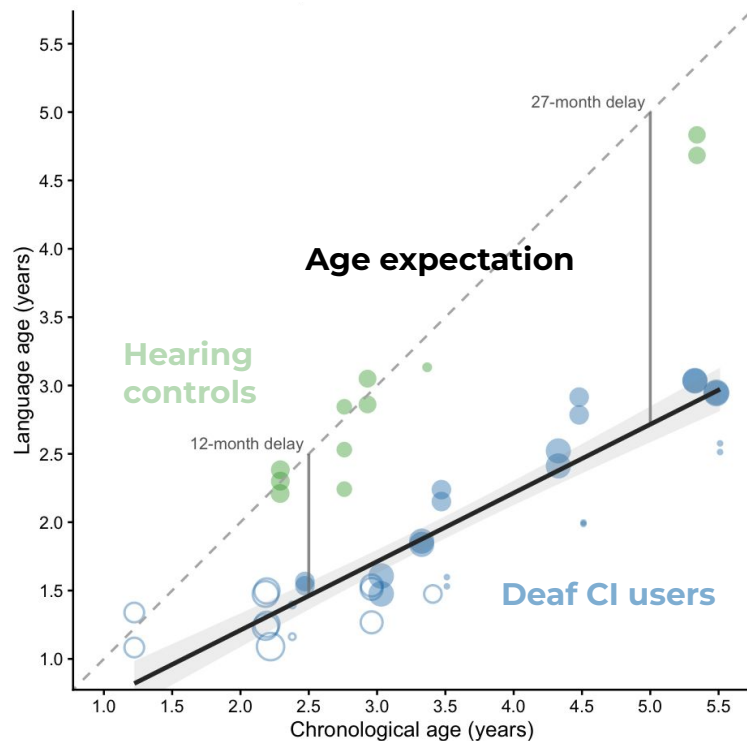
What Is a “Language Age”?

An estimate of the age level at which a child is currently understanding or using language compared with typical development

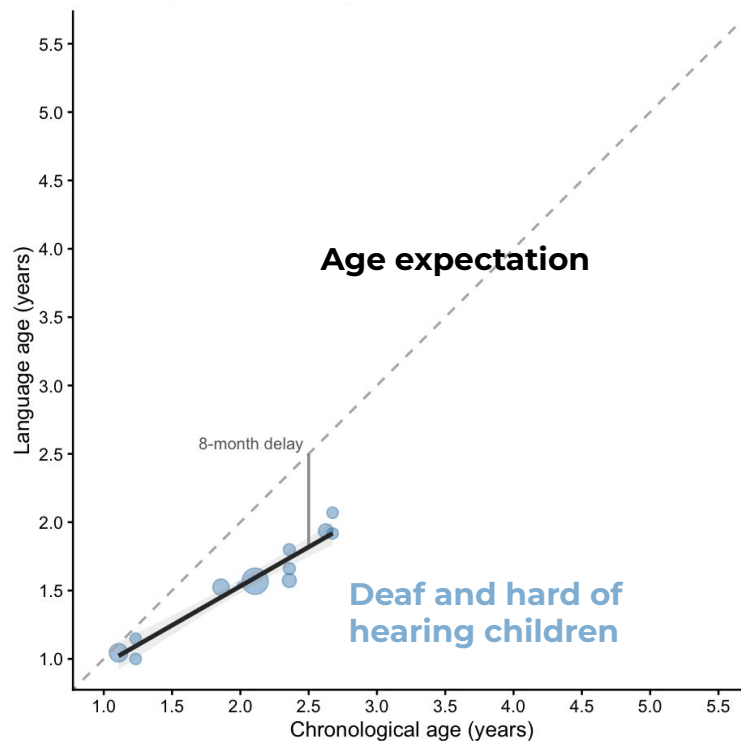
CDaCI

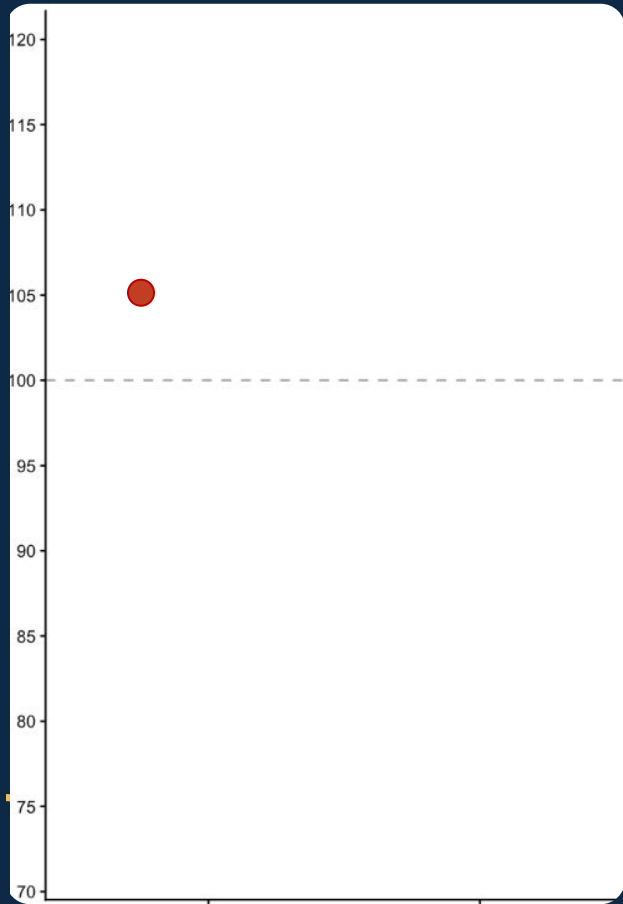


CDaCI



ODDACE/NECAP

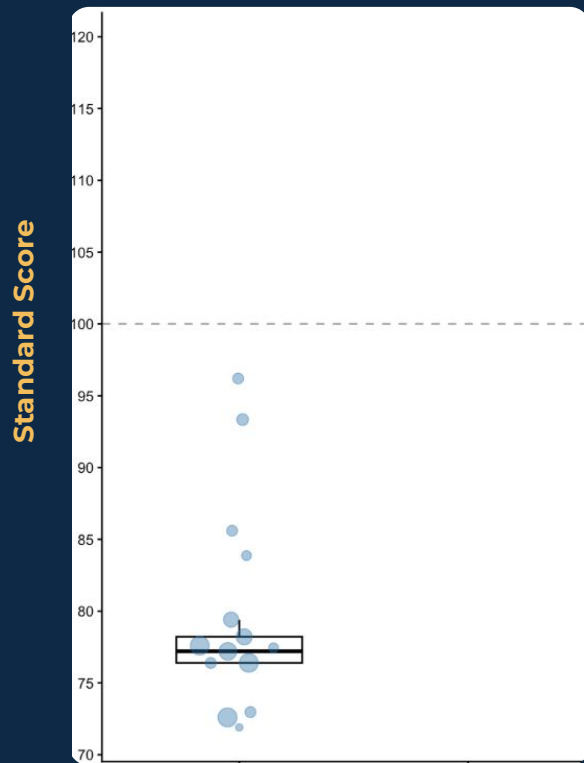




What Is a “Standard Score”?

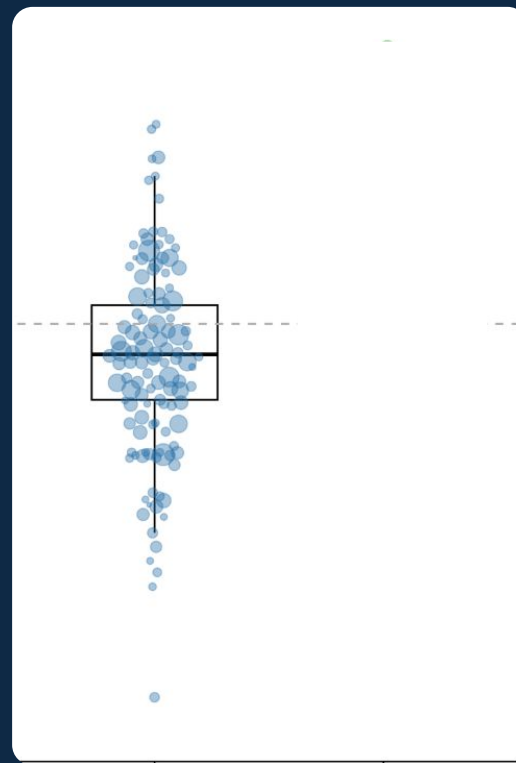
Shows how a child's language skills compare to other children the same age using 100 as the average

CDaCI



Deaf CI Users

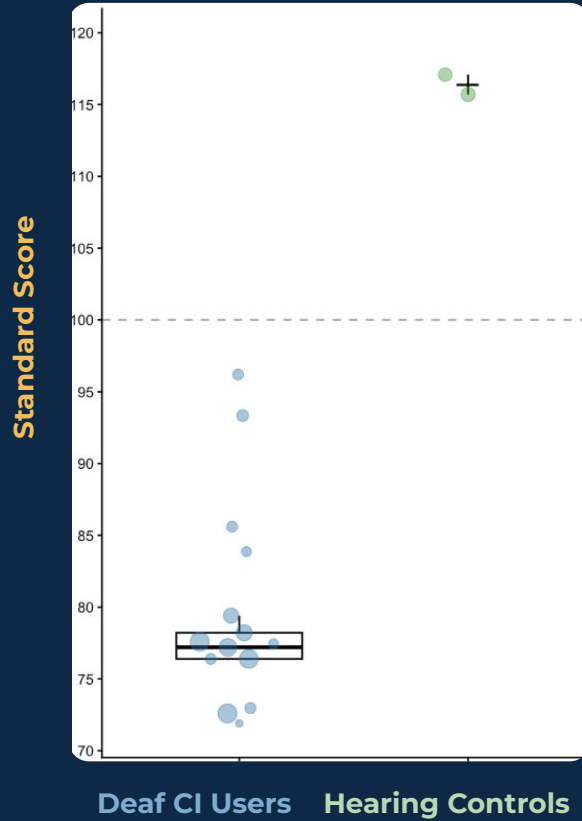
OCHL



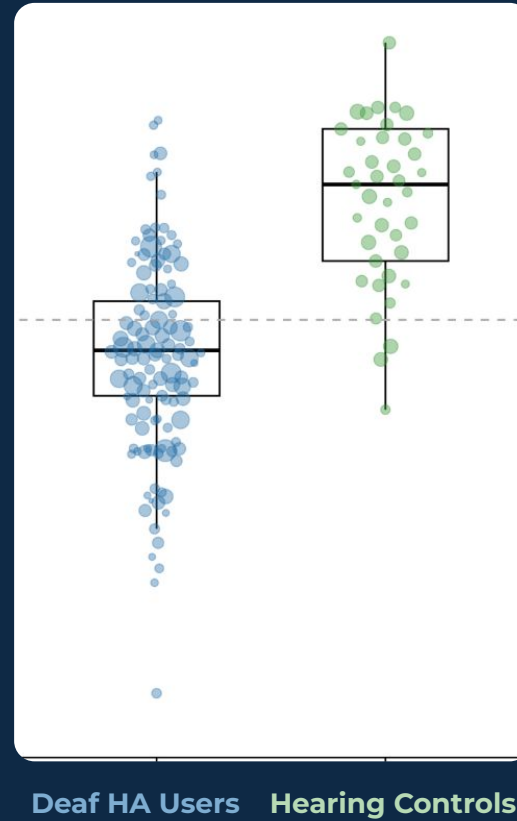
Deaf HA Users

Age Expectation

CDaCI



OCHL



Age Expectation

Deaf children with CIs enter kindergarten with a ~27 month delay in spoken language skills, on average, with no evidence that they will catch up.

**Children who are hard of hearing
are significantly behind their peers.**



Mission: Probable

Age-Appropriate Listening and
Spoken Language Abilities for
Children with Hearing Loss

2019

Deaf and hard of hearing
children are **unlikely** to
achieve age-expected
spoken language skills.

“The majority of hearing parents typically lack proficiency in ASL and, therefore, **cannot provide a language-rich environment** in both ASL and spoken English”

Geers et al., 2017, *Pediatrics*

Early Vocabulary Development

- Critical component of language development
- Early emerging linguistic skill—early identification of delay
- Robust predictor of later language development **(e.g., Rowe et al., 2012)**

Research Questions

1. Can children with hearing parents develop age-expected sign language vocabularies?
2. Does learning sign language interfere with learning spoken language?

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[GETTING STARTED](#)

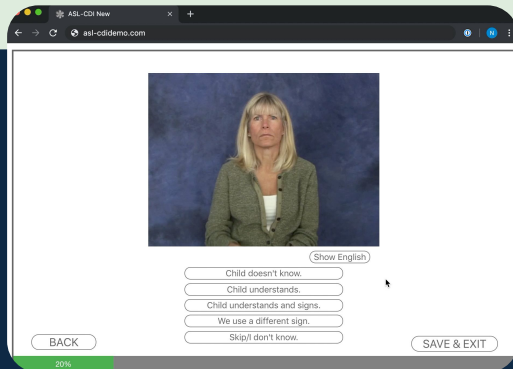
[TEAM](#)

[CONTACT](#)



ASL-CDI

an early ASL
vocabulary assessment

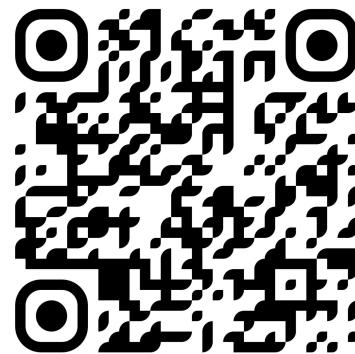


Jennie Pyers



Amy Lieberman

The **ASL-CDI 2.0**
is available
for free online.



Research Questions

- 1. Can children with hearing parents develop age-expected sign language vocabularies?**
2. Does learning sign language interfere with learning spoken language?



Methods

- **78 deaf children** of hearing parents completed the ASL-CDI
- Participation criteria:
 - Deaf child
 - Learning ASL
 - Younger than 6 years
 - No additional language related diagnoses (e.g., blindness, autism)

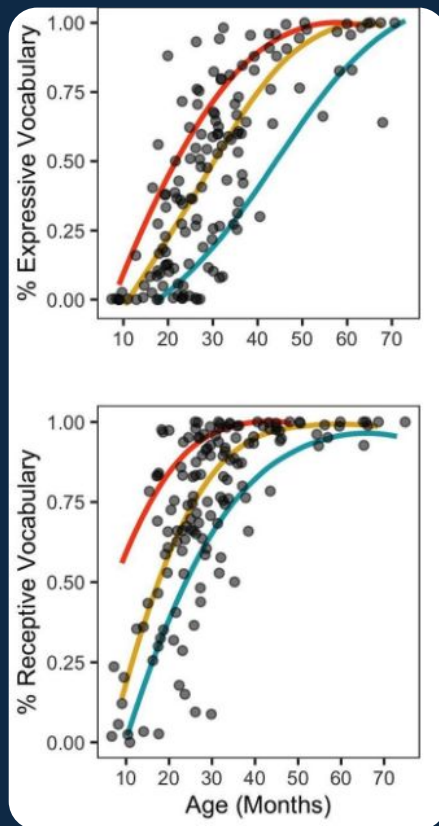
Methods

Divided into two groups by exposure category:

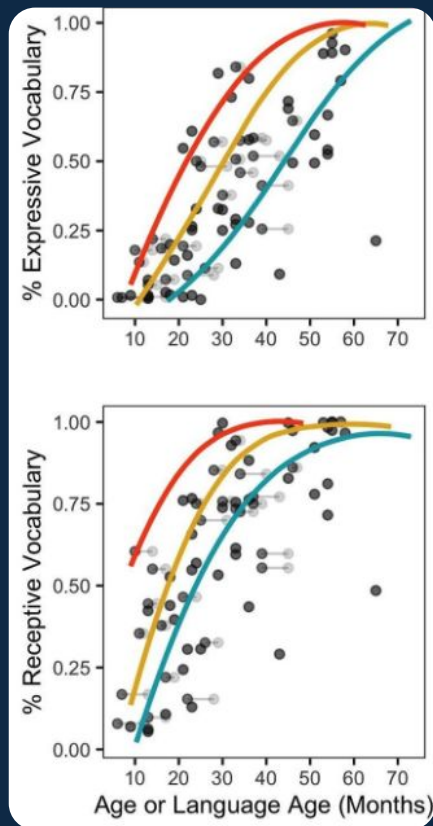
- **Early:** Began learning ASL between 0-6 months, per EHDI
- **Later:** Began learning ASL between 6-36 months

Results

Deaf Parents:
Reference Group



Hearing Parents:
Early Signers



Summary

Children with hearing parents can have age-expected vocabulary acquisition.

Research Questions

1. Can children with hearing parents develop age-expected sign language vocabularies?
- 2. Does learning sign language interfere with learning spoken language?**

“Exposure to sign language in the first three years of life **locks the language system into a vision-only configuration** that prevents possible future acquisition of auditory language.”

Giraud & Lee (2007)

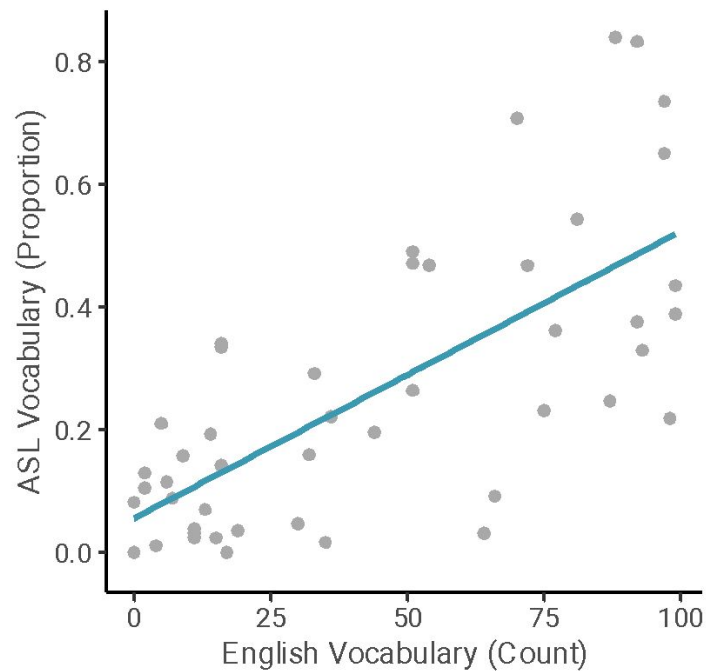
Methods

- 57 deaf children of hearing parents
- ASL-CDI and the English CDI

Methods

- Participation criteria:
 - Deaf child
 - Learning ASL
 - Learning English
 - Younger than 6
 - No additional language related diagnoses (e.g., blindness, autism)

Results



Summary

Children with strong ASL skills do not have weaker English skills; in fact, they have stronger English skills.

Summary

When considering their combined vocabulary in ASL and English, deaf children with hearing parents appear to have quite large vocabularies.



Elana Pontecorvo

Learning a sign language does not hinder acquisition of a spoken language; if anything, it **leads to a bilingual advantage.**



Research Questions

1. Can children with hearing parents develop age-expected sign language vocabularies? **YES!**
2. Does learning sign language interfere with learning spoken language? **NO!**



“The majority of hearing parents typically lack proficiency in ASL and, therefore, cannot provide a language-rich environment in both ASL and spoken English”

Geers et al. 2017 *Pediatrics*

Q&A

Thank you



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Deaf Center



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