Background

LENA Normative Study (AJSLP, 2017)

- Investigated formal curricula of adult-child talk and interaction measured automatically over a child’s day.

Longitudinal Follow-Up (Pediatrics, 2018)

- Purpose: Investigate whether the automated analysis of a young child’s early language environment predicts language and cognitive outcomes ten years later in adolescence.

Conclusions

- Findings support the concept that a child’s early language experiences may predict developmental outcomes years later.

How Does LENA Work?

- Time Files: Digital sound recordings that are time-stamped every 0.25 seconds.

- Sound Segments: LENA software automatically segments audio recordings into 0.25-second “sound segments” based on an algorithm that identifies speech.

LENA Metrics: Adult Word Count and Conversational Turns

- Turn-Counts: Measures the number of conversational turns taken by the child and adult.

- Turn-Taking: Indicates how often the adult and child take turns speaking in a conversation.

- Adult Word Count: Counts the number of words spoken by the adult.

How Does LENA Work?

- Parents wear a lightweight digital recorder into a Windows computer. LENA analysis automatically segments audio recordings into 0.25-second “sound segments” based on an algorithm that identifies speech.

- Data is uploaded and processed by the software, and reports can be time-stamped every 0.25 seconds.

- Automatic transcription software automatically creates the reports with time-stamped audio transcriptions.

- Parents can listen to the audio transcription of a child’s recorded day.

LENA Metrics: Full Sample Correlations

- Sample N = 146

LENA Metric Correlations with Assessments Across Child Age

- Effect Sizes: Ages 18-24 Months Controlling for SES

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