Exploring the LENA Adult Word Count Measure: What Researchers and Clinicians Should Know

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OVERVIEW
Application of LENA system to a parent-focused intervention
- LENA
  - New research tool
  - Automatic analyses of naturalistic language
- It Takes Two to Talk: Hanen Program for Parents (Adapted)
  - Pilot study
  - Interpreting LENA

WHAT IS LENA?
- A small, wireless digital recorder that a child wears for up to 16 hours per day
- Automated LENA measures:
  - Adult Word Count (AWC): total number of words said to child
  - Child Vocalizations (CV): total number of vocalizations (words and phrases) said by the child
  - Conversational Turns (CT): child vocalizes & adult responds or adult speaks & child responds

It Takes Two To Talk: Hanen Program for Parents (ITTTT), 4-Week Adapted Program
- Early exposure to a language rich environment promotes later academic success (Hart & Risley, 1995)
- Parent-based interventions and traditional SLP-implemented therapy are equally effective (Law, Garret, & Nye, 2004)
- Focuses on teaching parents techniques to build language skills during child-parent interactions.
- Covers the core content of the traditional 11-week ITTTT program
- Two 2-hour parent-education sessions
- Two 30-minute individual videotaped feedback coaching sessions
- Parents also receive a If It Takes Two to Talk handbook (Pepper & Wattman, 2004)

RESEARCH QUESTIONS
- Will parents show and increase in language input to their late-talking toddlers after the intervention?
  - Hypothesis: Yes, AWC and CT values: post tx > pre tx
- After the intervention, will late-talking children demonstrate improved language skills based on (a) parent report and (b) naturalistic child vocalization output?
  - Hypothesis: Yes, MBCDI and CV values: post tx > pre tx

METHOD
PARTICIPANTS
- Eight participants were recruited
  - 1 lost to technical error & 1 lost to attrition
- Results from 6 participants reported (ages 20 to 30 months at start)
  - Mono-lingual English speaking
  - All children were late-talkers:
    - expressive and/or expressive-receptive mixed language deficit
    - below the 10th percentile for total productive vocabulary on the MacArthur-Bates Communicative Development Inventory
    - normal oral and speech motor abilities
    - normal hearing ability
  - No frank neurological, gross-motor, or cognitive impairments.

DESIGN
- Quasi-experimental
  - 4 families in experimental group (2 families lost)
  - 4 families in wait-list control group
  - Pre-and post-tx data on 6 families
  - Pilot Study

FINDINGS
- Given a small sample size, we cannot make definitive conclusions about the effectiveness of the adapted If It Takes Two to Talk:Hanen Program for Parents

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REFERENCES