

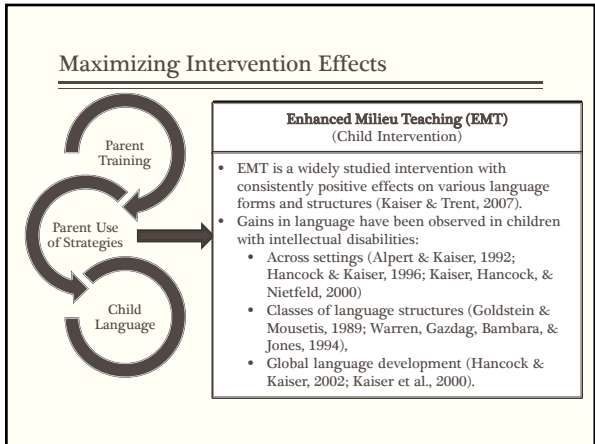
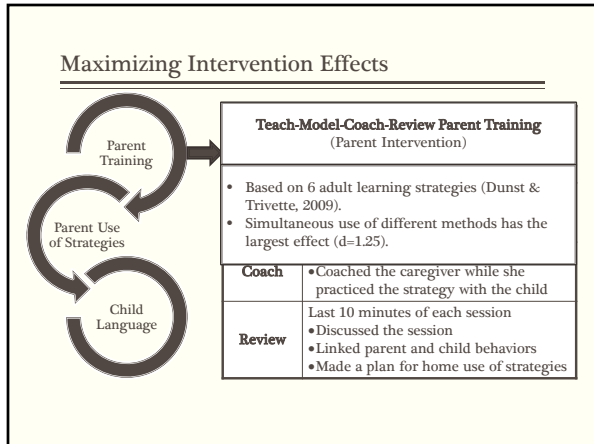
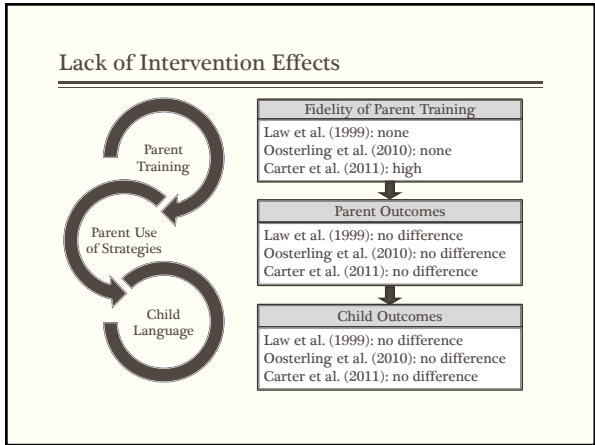
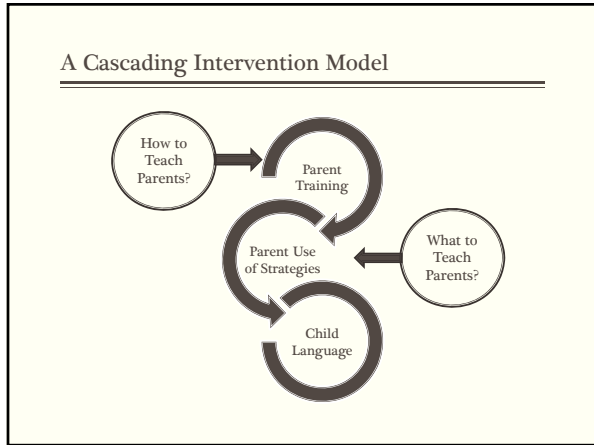
The Effects of a Parent-Implemented Language Intervention for Children With Language Impairment

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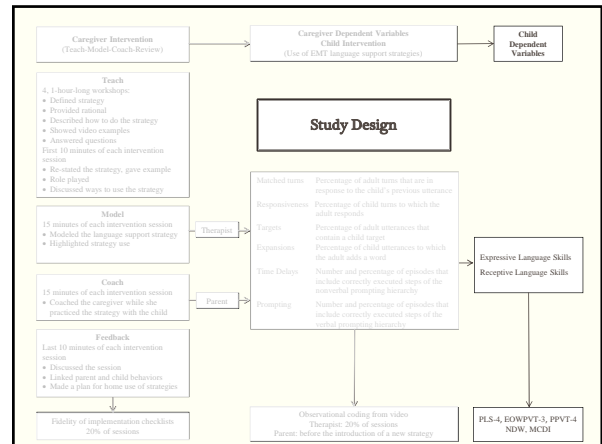
Including Parents in Intervention

- Quantity and quality of linguistic input provided by parents impacts child language development (Hart & Risley, 1995; Smith, Landry, & Swank, 2000; Tamis-LeMonda, Bornstein, & Baumwell, 2001)
- Teaching parents is cost effective (Gibbard, 2004)
- Including parents facilitates generalization to everyday contexts (Kashinath, Woods & Goldstein, 2006)
- Parent-implemented interventions have relatively consistent effects for children with expressive language impairment (Roberts & Kaiser, 2011)
 - Children have on average 53 more words ($g=.38$)



How is This Study Different?

- Includes children with receptive and expressive language delays
- Includes systematic parent training procedures with ongoing fidelity checks
- Includes continuous monitoring of parent use of language support strategies
 - Parents are not taught a new skill until they have achieved mastery with previous skill



Research Questions

- Do parents in the treatment group use more language support strategies than parents in the control group?
- Do children in the treatment group have better language skills than children in the control group?
- Does intervention reduce the number of children classified as having a language impairment?

Design

- Randomized controlled trial (NCT01975922)
 - Treatment n=45
 - Control n=43
- Children were assessed:
 - At the start of the study
 - Once a month during intervention
 - At the end of intervention (complete!)
 - 6 months after intervention (in progress)
 - 12 months after intervention (in progress)

Participants

- **Age**
 - 24-42 months
 - mean age of 30 months
- **Race**
 - 80% White
 - 18% African American
 - 2% Other
- **Mother Education**
 - High school only: 40%
 - Undergraduate degree: 30%
 - Graduate degree: 26%
- **Cognitive Skills** (Bayley Scales of Infant Development)
 - 90 (8)
- **Language Skills** (Preschool Language Scales – 4th Edition)
 - Expressive language: 75 (8)
 - Receptive language: 75 (16)

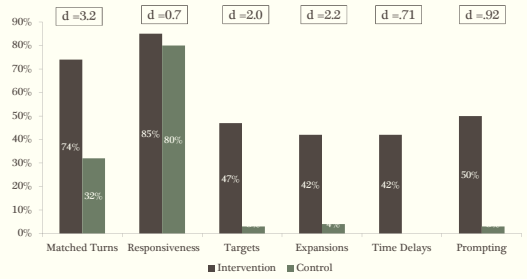
Measures

- Preschool Language Scale – 4th Edition
- Peabody Picture Vocabulary Test – 4th Edition
- Expressive One Word Picture Vocabulary Test – 3rd Edition
- Number of different words in a 20 minute language sample
- Number of words said reported by the parent on the MacArthur Bates Communicative Inventories

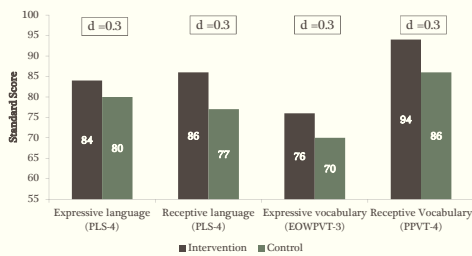
Intervention

- 28 Intervention Sessions
 - 4 Workshops
 - 11 Home sessions
 - 13 Clinic sessions
- Clinic Sessions
 - 10 minutes of review of strategies
 - 15 minutes of watching the therapist play with the child and use the strategies
 - 15 minutes practicing the strategies with the child
 - 10 minutes of discussion
- Home Sessions
 - 10 minutes of review of strategies
 - 15 minutes of watching the therapist use the strategies with the child
 - 30 minutes practicing the strategies with the child during play
 - Play: 15 minutes
 - Book: 5 minutes
 - Snack: 5 minutes
 - Routine of their choice: 5 minutes
 - 10 minutes of discussion

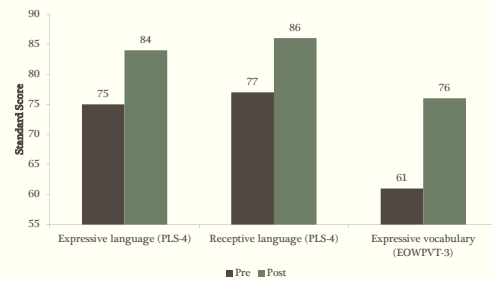
RQ1: Parent Use of Strategies



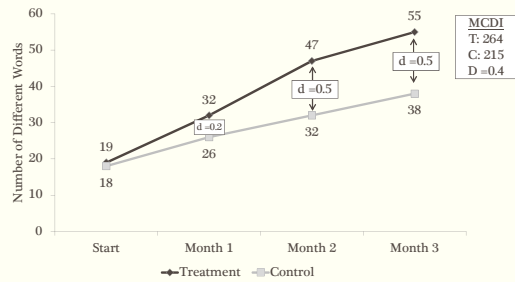
RQ2: Child Norm-Referenced Outcomes



RQ2: Child Norm-Referenced Gains

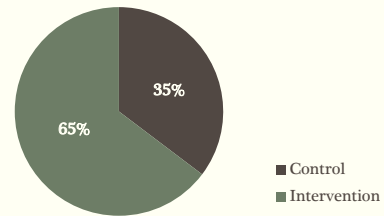


RQ2: Child Number of Different Words



RQ3: Reduction of language delays

Children with scores in the average range on the PLS-4



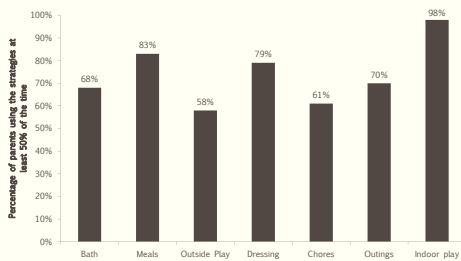
Overall Parent Satisfaction

- Helped their child's language skills: 98%
- Level of comfort using the strategies
 - Somewhat comfortable: 8%
 - Very comfortable: 92%
- Average amount of strategy use: 17 hrs (range: 2 to 77, SD=18)
- Taught the strategies to another caregiver: 98%
- Preference for intervention location
 - Clinic only - 2.5%
 - Clinic + home - 95%
 - Home only - 2.5%

Parent Satisfaction with Specific Strategies

- Parent teaching strategies parent found most helpful
 1. Practice with coaching (78%)
 2. Observing (78%)
 3. Workshops (35%)
 4. Role playing (20%)
- Language strategies parents found most effective
 1. Responding
 2. Matched turns
 3. Expansions
 4. Targets
 5. Prompting
 6. Time Delays

Parent Use of Strategies Across Routines



The Cost of Intervention

- Average cost of \$3861
- Range of \$2678 to \$5653
- \$70 per word



Future Directions

- Long terms effects, 6 and 12 months after intervention?
- Long-term effects on reading?
- Can the intervention be shorter?

Acknowledgments

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