

Longitudinal Effects of Low Intensity Early Communication Intervention

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Introduction

- Responsivity Education/Prelinguistic Milieu Teaching (RE/PMT) is a treatment designed to promote prelinguistic communication and language development in young children with developmental disabilities.
- Based on data collected in a structured examiner-child sample, Fey and colleagues (Fey et al., 2006) demonstrated significant increases in prelinguistic communication in children who participated in RE/PMT compared to a control group that did not receive RE/PMT.

Questions

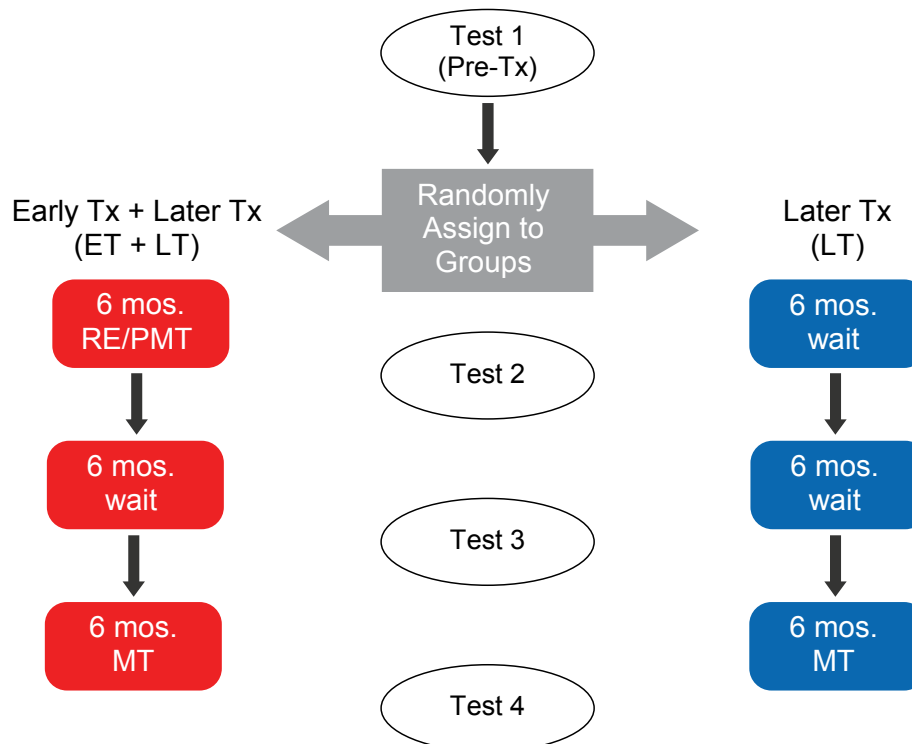
In this study, we addressed three additional questions

1. What is the longitudinal effect of RE/PMT on children's rate of intentional communication?
2. What is the longitudinal effect of RE/PMT on children's rate of production of different words (i.e., lexical density)?
3. What is the longitudinal effect of RE/PMT on parent's recoding of children's communicative attempts?

Method

- **Participants** = 51 children with developmental delays between 24 and 33 months
 - Bayley 2nd Ed. MDI less than 70
 - 10 or fewer different words
 - Rate of less than 2.25 intentional communication acts per minute
 - 26 children had Down syndrome (DS)
 - No diagnoses of autism at the outset
- **Experimental Design** = Randomized control group design (See Figure 1)
 - Early Tx + Later Tx (ET + LT) = 6 months of RE/PMT plus 6 months wait plus 6 months of milieu language teaching.
 - Later Tx (LT) = 12 month wait plus 6 months of milieu language teaching
 - 13 children with DS in each group
 - Measures of child communication completed before intervention and at 3 additional 6-month intervals.
 - Data were combined from two contexts, a relatively UNstructured examiner-child sample and a parent-child interaction.

Figure 1. The Experimental Design

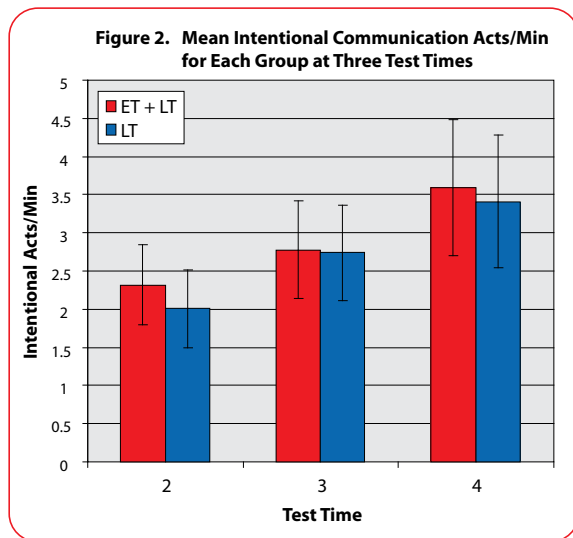


Treatment Descriptions

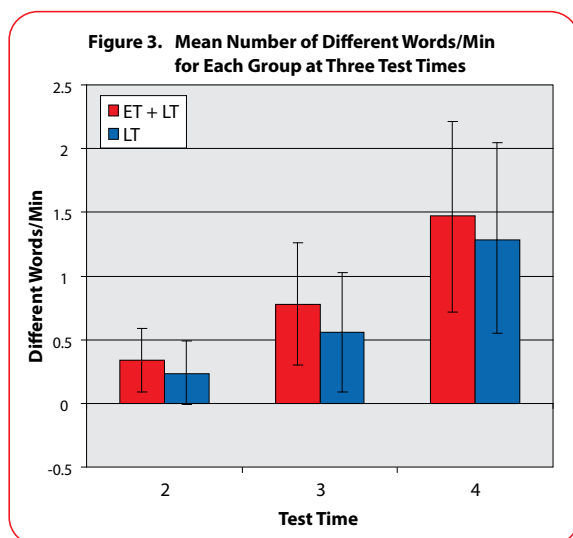
- **Responsivity Education/Prelinguistic Milieu Teaching (RE/PMT)**
 - Parents received 8 responsivity education (RE) sessions over the 6-month period.
 - Children received 20 min. intervention sessions, 4 times a week for 6 months.
 - Intervention sessions were 1:1 with an SLP.
 - Child communication targets included requests and comments using gestures, vocalizations and/or coordinated eye gaze.
- **Milieu language Teaching (MT)**
 - Parents of all children in both groups received up to 6 RE sessions over the final 6-month period ($M = 5.33$ sessions, $SD = .97$).
 - One 45-minute session of milieu language teaching per week for 6 months
 - Child communication targets focused on language goals such as word production or production of specific semantic relations.

Results

- Treatment did not have a significant effect on rate of communication over time. See Figure 2.

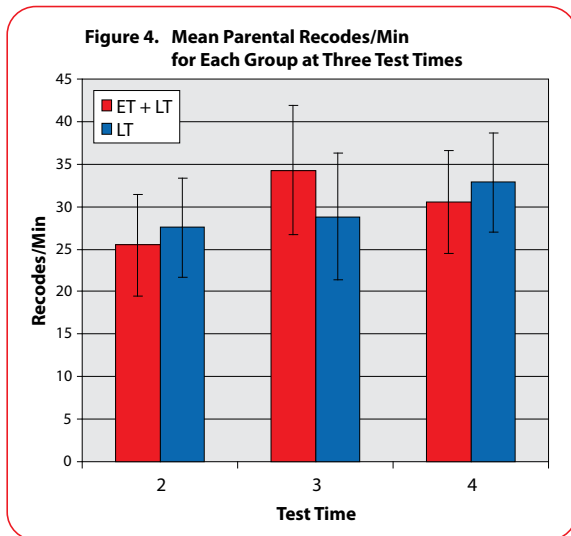


- The test for Time by Treatment interaction was not statistically significant.
- The subsequent test for main effect of Treatment group was not statistically significant.
- Treatment had no significant effects on lexical density at any time point. See Figure 3.



- The test for Time by Treatment interaction was not statistically significant.
- The subsequent test for main effect for Treatment group was not statistically significant.

- Treatment did not have a significant effect on parents' recoding of child utterances. See Figure 4.



- The interaction between Time and Treatment was not statistically significant.
- However, the main effect for Time had a moderate effect size.

Discussion

- Fey et al. (2006) found that a 6-month course of RE/PMT implemented at a low intensity can have a significant, but modest short-term impact on prelinguistic communication development in a structured interaction context.
- At this duration and intensity, the modest gains were not maintained and generalized to other contexts or to other general measures of language development, such as lexical density.
- We are proceeding to evaluate the approach by administering RE/PMT at greater intensity levels and over longer treatment periods.

References

Fey, M., Warren, S., Brady, N., Finestack, L., Bredin-Oja, S., & Fairchild, M. (2006). Early effects of prelinguistic milieu teaching and responsivity education for children with developmental delays and their parents. *Journal of Speech, Language and Hearing Research*, 49(3), 526-547.

Acknowledgement

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