Measuring Treatment Fidelity in a Triadic Intervention Model

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Introduction

• Parent-Implemented Enhanced Milieu Teaching (EMT) is a triadic model of intervention:
  • Therapeutic training provided to the parent and also provides intervention to child
  • Child: receives parent training from the therapist and subsequently provides intervention to the child
  • Parent: receives parent training from the therapist
• Fidelity of implementation occurs at three levels:
  • The therapist’s delivery of the parent training
  • The therapist’s implementation of the intervention strategies
  • The parent’s implementation of the intervention strategies

It is essential to measure fidelity of implementation at each of these levels to fully interpret the results of intervention on parent behavior and child outcomes. The purpose of this paper is to illustrate measurement of fidelity in triadic intervention.

Research Questions

1. What is the fidelity at each level of implementation of the intervention?
2. What is the impact of high fidelity therapist training on parents’ implementation of EMT?
3. Given high fidelity therapist training and high levels of fidelity, do children in the treatment group have better language skills than children in the control group following intervention?

Methods

Research Design
• Randomized clinical trial of EMT (n=16) versus business as usual control (BAU) group (n=18)

Participants
• 34 children between 24 and 42 months
• Mean age of 31 months
• 83% male, 17% female
• 84% Caucasian, 16% African American
• Average yearly income of $61,750 with the majority of mothers (69%) with a bachelor’s degree or higher
• Normal cognitive ability but delayed language
• Average yearly income of $61,750 with the majority of mothers (69%) with a bachelor’s degree or higher

Intervention
• 24, 60-minute intervention sessions in the clinic (14) and home (10)
• Bayley Language <79 (M=70, SD=9.9)
• Bayley Cognitive > 80 (M=88, SD=6.1)

Therapist training of parents was delivered at high levels of fidelity across home and clinic settings.

Results

Therapist training of parents was delivered at high levels of fidelity across home and clinic settings.

Observational measures of four key therapist parent-training behaviors indicated fidelity ranged from 84 to 99% across behaviors and settings.

This level of fidelity in a well specified model of parent training was sufficient to train parents to implement EMT at criterion levels.

Parents implemented EMT at levels comparable to the levels of fidelity achieved by the therapist.

Parent and child outcomes of the intervention in the treatment and BAU comparison group were analyzed using multi-level modeling.

Parents used all six EMT strategies significantly more than parents in the BAU group.

Children whose parents were taught to implement EMT scored higher on all language measures than did children in the BAU group (ES ranged from .29-.75).

Conclusion

• Levels of fidelity were high for the therapist’s parent training and the parent’s use of EMT strategies.
• Parents in the EMT group used all six language support strategies more than parents in the control group.
• Children in the EMT group used more words and longer sentences that children in the control group.
• Children in the EMT group had significantly greater PLS-4 scores.

Implications for Practice

• Parents can learn to use EMT language support strategies when therapists provide the parent training systematically with high levels of fidelity.
• Preliminary findings suggest that parent-implemented EMT is an effective intervention for children with language delays, when parents use the strategies at criterion levels.

Limitations & Future Research

• The sample size is small.
• Future research should examine the directionality of the relationship between parent use of strategies and child language skills across settings and over time.
• Future research should compare the effects of different methods of parent training.

References


More Information

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This work was supported in part by IES grant number R305B080025 and R324A090181.