

INTERVENTION FIDELITY IN THE RANDOMIZED CONTROLLED TRIAL “EFFICACY OF THE START-PLAY PROGRAM FOR INFANTS WITH NEUROMOTOR DISORDERS”

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Summary

- Previous motor intervention (physical therapy) studies lack fidelity measures¹
- Motor intervention poorly described¹
- Purpose: Train high-evidence intervention with highest fidelity
- Our training process results in significant START-Play program adherence and differentiation from usual early intervention

Components of Fidelity

- Used model of Knoche, Sheridan et al (2010)²
- Adherence: how well our interventionists adhere to the key ingredients
- Program differentiation: is the START-Play intervention different than intervention delivered in usual early intervention?
- Dosage: # of minutes in which key ingredients are being used

What are key ingredients?

- An essential part of intervention that must be delivered, and features that likely differentiate it from other interventions
- START-Play key ingredients measured for fidelity are:
- Cognitive tasks offered with motor challenge
 - Social opportunities to scaffold within cognitive/motor challenge
 - Parents assisting with intervention directly
 - Minute-by-minute coding for key ingredients done for each session

Procedure

- Review PowerPoint with cognitive constructs defined with site PI
- 3 days of Onsite Training with grant PI
- Watched videos of 3 START-Play (or similar) sessions discussed key components in action
- Therapists each demonstrated 2 sessions with infants in which 80% of their session meets the standards of START-Play.
 - Approved to start intervention with enrolled infants
- Each therapist taped 3 sessions during 12-week intervention
- Fidelity coded by single coder with intra-rater reliability of 90% agreement

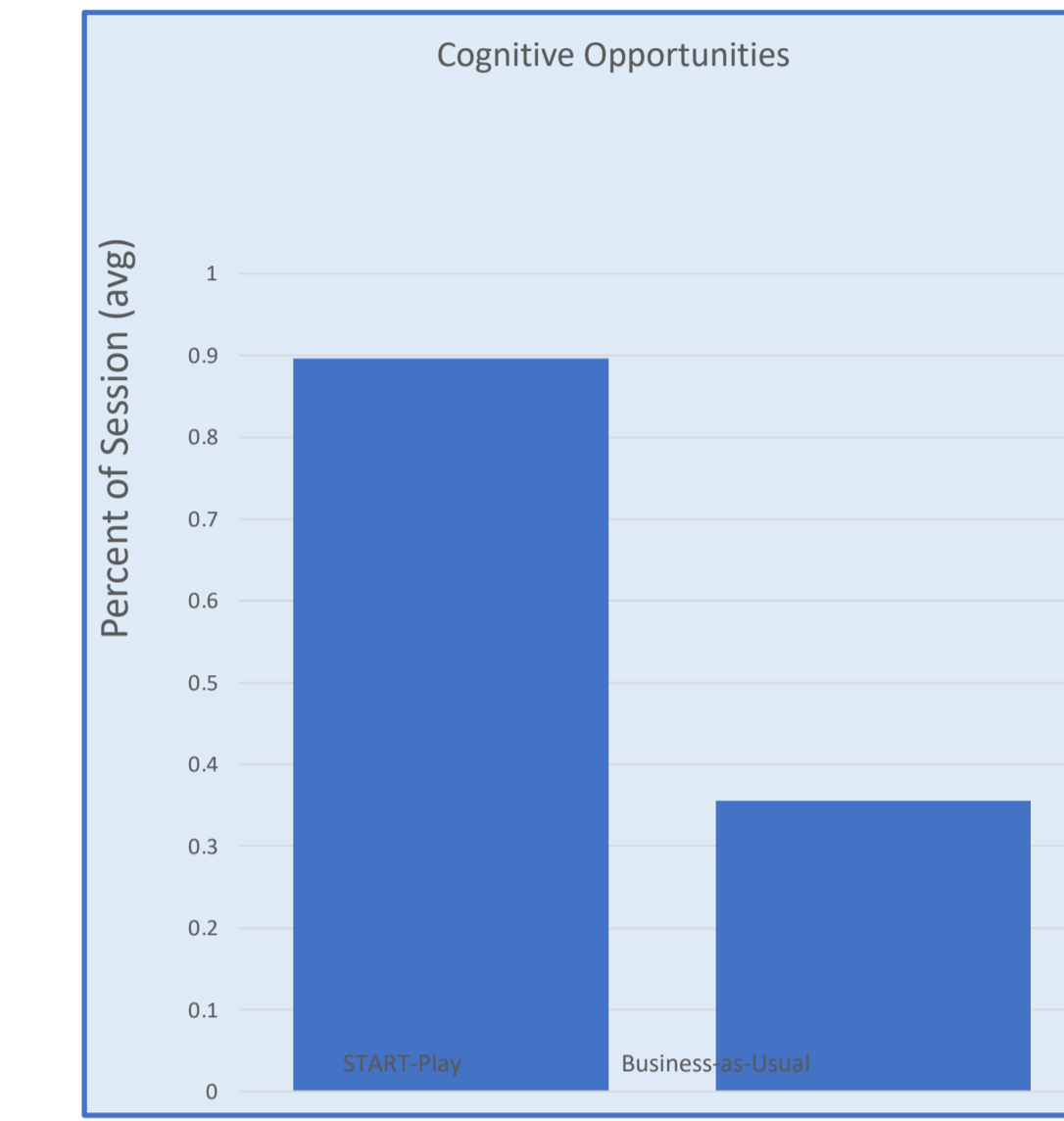
	Cognitive Opportunities	Social Opportunities	Parent Assist	Total Adherence
0:00-1:00	1	1	0	2
1:00-2:00	1	1	1	3
Total	2	2	1	5
Required	1 or 50%	2 or 100%	1 or 50%	>4

Conclusions

- Reliable fidelity can be established across multi-site project with heterogeneous infants and families
- Training for physical therapists results in high adherence to intervention approach
- START-Play intervention is significantly different from business-as-usual in early intervention across sites
- Business-as-usual early intervention appears to have a low focus on cognitive/motor/social strategies and surprisingly low assistance of parents in home visits

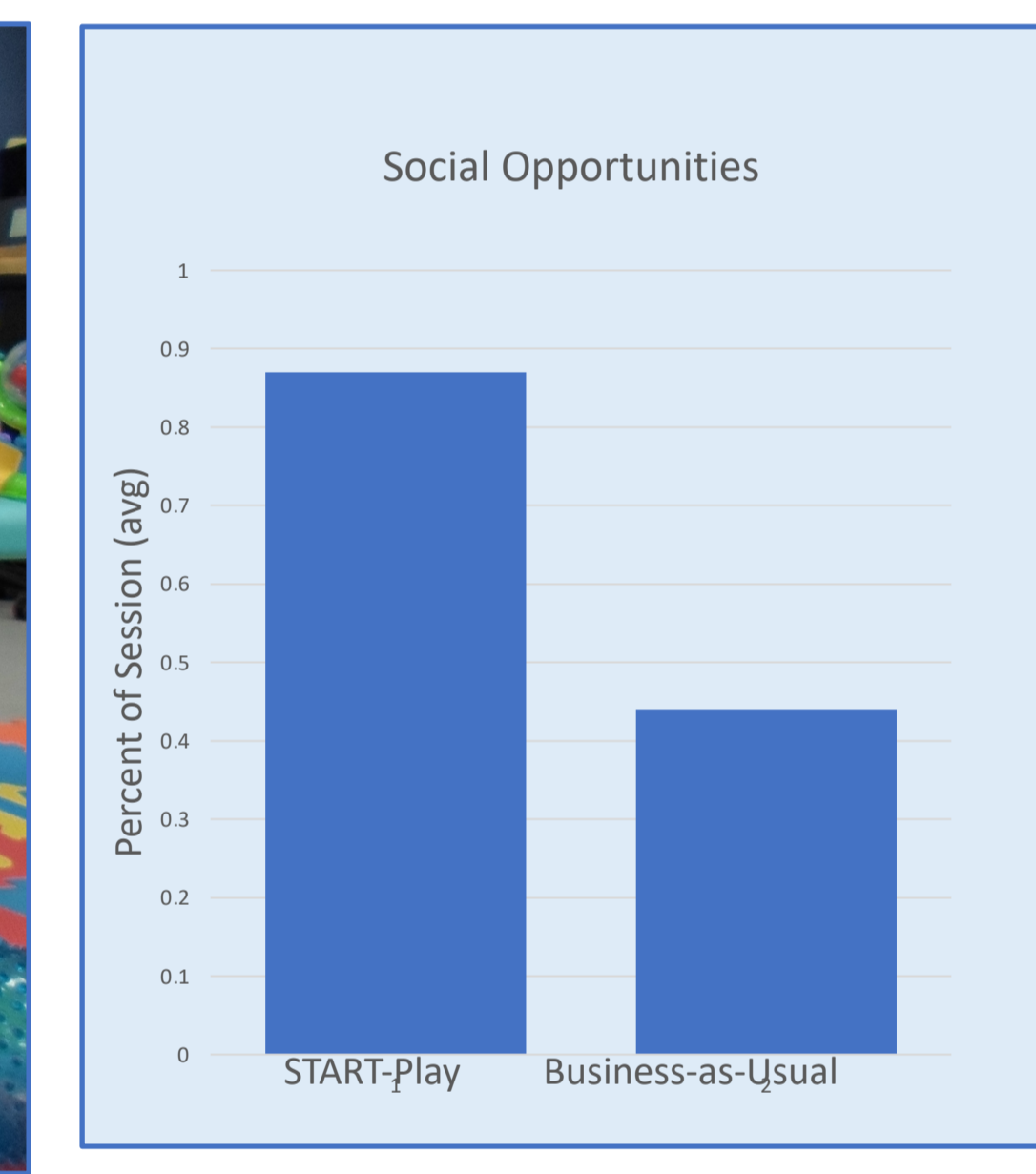
References

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- Knoche, L. L., Sheridan, S. M., Edwards, C. P., & Osborn, A. Q. (2010). Implementation of a relationship-based school readiness intervention: A multidimensional approach to fidelity measurement for early childhood. *Early Childhood Res Quarterly*, 25(3), 299-313.



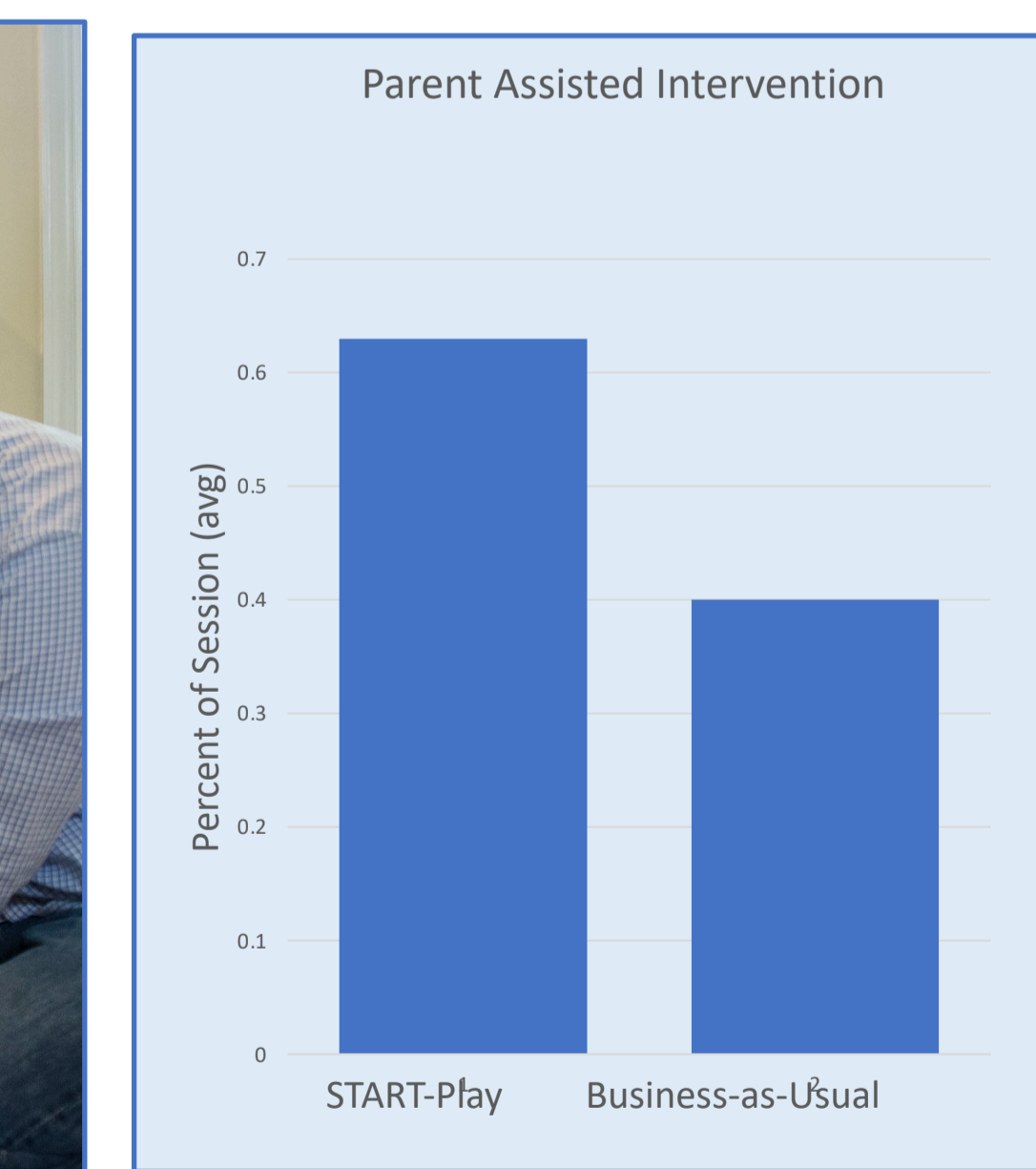
Cognitive opportunities

- Object permanence
- Means-end
- Body/object affordances
- Joint attention
- Must occur jointly with “just right” motor challenge



Social Opportunities

- Face-to-face interaction with child
- Engagement with parent, therapist, siblings
- Pauses allow active responses



Parents assisting with intervention

- Parent actively engages with the child and therapist
- Parent leads an activity blending motor and cognitive without therapist handling child



Acknowledgements

Institute of Education Sciences, U. S. Department of Education
 Early childhood and early intervention
 R324A150103
 Thank you to all the therapists and families in START-Play!