



# Early Analysis of the Feasibility and Acceptability of Family Implemented TEACCH for Toddlers (FITT)

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Conflict of Interest: None



## Background

- Interventions based on the TEACCH model are widely accessible for children with ASD; however, there is limited evidence of the efficacy of the approach for young children with autism.
- FITT was developed as a structured teaching intervention adapted to be developmentally appropriate for toddlers with ASD, and more responsive to needs of families from a range of socioeconomic backgrounds.
- FITT is a 6-month intervention that includes 4 group-based parent education sessions and 20 in-home individualized coaching and feedback sessions from a trained therapist.
- The goals of FITT sessions address
  - social-communication skills,
  - play skills,
  - prevention of problem behaviors
  - positive home routines.
- Study of the efficacy of FITT on child and family outcomes is ongoing in a three-year randomized control trial with 60 toddlers.

## Objectives

The objectives of this early analysis are to:

- Examine the **feasibility** of FITT through study of therapist implementation and parent adherence data, as well as parent attendance and session completion data
- Examine the **acceptability** of FITT through study of social validity measures
- Examine the **relationship between parental perception of improvement across developmental areas and change scores on related standardized outcome measures**

## Participants

- Participants include 17 toddlers with ASD between 17 and 35 months of age at enrollment, as well as their primary caregivers (all mothers).
- Only toddlers randomly assigned to FITT are included in the present study

	Intervention (n=17)
CA (SD; range)	29 Months (5.29; 17-35)
MSEL ELC (SD, Range)	58.76 (12.91; 49-86)
ADOS Classification	15 Autism, 1 ASD, 1 PDD-NOS
Gender	88.23% male
Ethnicity	11 Caucasian, 3 African American, 3 Biracial
Rural	6

## Methods & Measure

- Treatment fidelity data** were collected at 100% of sessions (IOA at 20% of sessions), and parent adherence ratings were also collected at each session.
- Parents completed a *social validity rating form* upon completion of the 6-month intervention period. Social validity ratings covered 5 domains: overall satisfaction, goals, procedures, perceived child outcomes, and parent outcomes. Items in each domain were rated using a Likert scale (1 – 5), with higher ratings associated with greater satisfaction.
- Parents rated their child's perceived improvement across seven domains using a Likert scale (1-5), with 1=regression, 3=no change, and 5= a lot of progress. Correlations between these ratings and the change scores on the Mullen Scales of Early Learning (Expressive Communication and Visual Reception subscales) were conducted. The Mullen was administered at pre/post test (6 months), and standard scores were used in the calculation of the change score.

## Results: Feasibility & Acceptability

- Feasibility** results were promising: attendance levels were excellent, with all participants completing all 20 in-home sessions during the 6-month period.
- Treatment fidelity** ratings of project interventionists was strong, with average fidelity ratings of **93%** (range: 68% - 100, IOA 80% - 100%).
- Parent adherence** to FITT was adequate but variable, with parents achieving an average of **74%** of total possible adherence points (range: 65% - 87%).

## Results: Social Validity & Correlations

- Social validity** ratings were high in all domains: satisfaction (mean = **4.7**, s.d. = .4), goals (mean = **4.6**, s.d. = .5), procedures (mean = **4.5**, s.d. = .6), perceived child outcomes (mean = **4.6**, s.d. = .4), and parent outcomes (mean = **4.8**, s.d. = .3).
- A significant correlation coefficient was found between the perceived improvement in speech and language and the actual improvement as measured by the Mullen.

Social validity is completed by parents after the intervention is complete

Please complete the items below. The items should be completed by circling the number next to the questions that best indicate how you feel about the described intervention accommodations.

4. **Structure:**

1. How understandable was the intervention for your child?	Very hard to understand	2	Neutral	4	Very easy to understand
2. How satisfied are you with the intervention for your child?	Not at all satisfied	2	Neutral	4	Very satisfied
3. How satisfied are you with the intervention for yourself as a parent?	Not at all satisfied	1	Neutral	4	Very satisfied
4. How likely are you to continue some of the intervention strategies after completion of the study?	Very unlikely to continue	1	Neutral	4	Very likely to continue

6. **Goal:**

3. How appropriate was it to target the goals included in the intervention for your child?	Not at all appropriate	2	Neutral	4	Very appropriate
2. Did this intervention target enough goals?	Not nearly enough	1	Neutral	4	Enough
2. How included were you in the process of developing the goals targeted in the intervention?	Not at all included	1	Neutral	4	Very included

4. Please rate each of the goals listed below as they were targeted in the intervention.

	Too little	Just right amount	Too much
a. Communicating with others (with objects, pictures, words)	3	2	4
b. Interacting with others	1	2	4
c. Playing with toys	1	2	4
d. Sharing interests w/ people (showing, giving, passing, pointing)	1	2	4
e. Paying attention to people (listening, following, imitating)	1	2	4
f. Problem solving	1	2	4
g. Understanding language	1	2	4
h. Understanding people	1	2	4
i. Motor skills	1	2	4
j. Drawing	1	2	4
o. Writing	1	2	4
p. Self-care (toileting, dressing, bathing)	1	2	4
q. Participating in routine around home	1	2	4
r. Transitioning from activity to activity	1	2	4

Treatment fidelity data is collected each session by interventionist and IOA is collected at 20% of sessions by project investigators

Fidelity Checklist for Interventionist

Date:      ID:      Session:     

Session 5: Communication Basics - Supporting Receptive Language and Transitions

Before the Session:

- Prepare any elements of structure to use during the targeted routine you will work on with the family (e.g. book, snack, outside)
- Write down any examples of receptive language difficulties you may have observed
- Make a First/Then if appropriate for use with subject
- Gather all play materials & activities (see session plan and phone for specifics)
- Determine if siblings will be home & make a plan

Bring to the Session:

- Video clip of transition difficulty
- Extra finished box & First/Then
- Takeplay materials & activities in storage container (see session plan)
- Table & chair
- Session summary for family
- Any elements of structure (from the restructuring) designed for use during targeted routine

Session Highlights

Goals: 1. Introduce topic of receptive language, its role in transition difficulties, and why it is important to target with structured teaching strategies

2. Demonstrate how the structure used within tasks/activities can support receptive language

3. Introduce First/Then during table routine if appropriate (with objects)

4. Model and describe "tailored language" during play session

5. Introduce finished box during play sessions and home routines

6. Practice targeted routine with elements of structure and discuss how they support receptive language

Session Plan Summary

- Review of previous session and discussion of "homework"
- Demonstrate concept of receptive language (RL) - demonstrate with video, model how RL is supported by elements of structure
- Conduct tableplay routine 2x
- Complete a targeted routine with parent & child using elements of structure (e.g. snack, diaper change)
- Identify how strategies could be used in another routine

Session Reminders: 1. Have sure parents are actively involved in sessions- leading routine sessions with your support. Provide specific praise & complete feedback for family

2. Only introduce the idea of First/Then if it is appropriate for child

Family Implemented TEACCH for Toddlers ©

Parent Engagement Rating Form is completed after each session by interventionist

FITT Parent Engagement Rating Form

Child ID:      Session Date:      Interventionists Initials:     

Was the session held?  Yes  No (If no, please explain on back)

Duration of Session:      minutes Session type:  Group  In-home

Session Number & Topic:     

Overall, how effective was this session?

Minimally 1 (-.50) Moderately 3 (.70) Maximally 5 (.90)

Please indicate (circle) the extent to which the parent/caregiver did the following during today's session:

Parent Participation and Implementation Behaviors	Minimally	1	2	3	4	5	Maximally
Was prepared for the session (parents, child and parent ready to engage and focus attention on session, space made available for tableplay materials, activities)	1	2	3	4	5		
Confirmed use of intervention strategies since last session (% of homework options that were attempted and described) (throughout)	1	2	3	4	5		
Reflected on success/failure of implementation and any changes noted in child behaviors	1	2	3	4	5		
Actively participated in the session (engaged and attentive during entire session, interacting with child and/or interventionist throughout)	1	2	3	4	5		
Interacted frequently and appropriately with the child using new strategies (with teaching from interventionist)	1	2	3	4	5		
Asked relevant questions and/or made relevant comments that demonstrated understanding of the intervention strategies implemented (through comments related to session level, confidence, and parental facilitation)	1	2	3	4	5		
Collaborated with interventionist in generating ideas for implementation of strategies during daily activities and routines between intervention sessions	1	2	3	4	5		

Total Points:      / 40 =     

Column Totals:                              

Modified from Early Development Project (P. Watson & Cecil) and Mahoney and MacDonald (2004)

## Parent report of perceived improvement

	Speech and Language	Cognitive	Emotional	Social	Behavior
Change in Expressive Language on Mullen	.63*	.31	.01	.04	.12
Change in Visual Reception on Mullen	.34	-.22	.13	.17	.02

\*p < .05

## Acknowledgments

This study is funded by grant R40 MC 22648 through the U.S. Department of Health and Human Services, Health Resources and Services Administration, Maternal and Child Health Research Program