



Supporting Rural Families with Toddlers on the Autism Spectrum: Understanding Family and Child Characteristics in an Effort to Develop Accessible and Effective Intervention



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Conflict of Interest: None

Background

- Access to quality early intervention services for toddlers with ASD in rural communities is rare across the country.
- Family Implemented TEACCH for Toddlers (FITT) was developed as a structured teaching intervention adapted to be developmentally appropriate for toddlers with ASD, and more responsive to needs of rural families in NC.
- 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 and play skills, prevention of problem behaviors, and positive home routines.
- FITT has supported rural recruitment through training of providers on early ID of ASD, offering diagnostic assessments, providing flexible scheduling/communication options, and offering in-home sessions.

Objectives

- Better understanding of the status and needs of rural families and how intervention translates to these families will allow researchers and interventionists to form partnerships in rural communities.
- The objectives of this early analysis are to:**
- Compare the sample of rural and non-rural families through descriptive analysis of demographic data and pre-test scores on a sample of measures; and
 - Compare feasibility and acceptability of FITT for rural versus non-rural families through the analysis of parent engagement and social validity data.

Methods

- Study of the efficacy of FITT on child and family outcomes is ongoing in a three-year randomized control trial which will enroll 60 toddlers with autism and their caregivers who will be randomly assigned to receive FITT or services as usual (SAU).
- Demographic data related to family variables (e.g., race, maternal age, maternal education, income, household size) were collected at study enrollment, as well as baseline data related to family and child functioning (e.g. Parenting Stress Index, Mullen Scales of Early Learning, ADOS severity score).
- T-tests used to examine differences in mean scores across the rural and non-rural sample.
- Parent adherence data were collected at in-home sessions for the FITT group. In addition, FITT group parents completed a social validity rating form upon completion of the full intervention.
- For the FITT group, T-tests were used to compare mean scores on each measure across the rural and non-rural sample.

Results

- There were **no significant differences** in mean scores on demographic or pre-test variables between the rural and non-rural sample.
- The samples vary in household income and maternal education, with the non-rural sample having higher income and level of education.

	Non-Rural (n = 21)	Rural (n = 18)
Age in months (SD; Range)	29.62 (3.99; 17 - 35)	28.50 (5.10; 19 - 35)
Gender	Male = 17; Female = 4	Male = 16; Female = 2
Race	White = 12 Black/African American = 4 More than 1 race = 3 Asian = 2	White = 14 Black/African American = 1 More than 1 race = 2 Not Reported = 1
Ethnicity	Hispanic or Latino = 1 Non-Hispanic or Latino = 18 Not Reported = 2	Hispanic or Latino = 3 Non-Hispanic or Latino = 15
Household income (median)	\$70,000 – \$80,000 (range: \$5,000 – \$250,000)	\$45,000 – \$50,000 (range: <\$5,000 – >\$300,000)
Maternal education	College degree (range: HS/GED – Professional degree)	Toward college degree (range: Voc. degree – Professional degree)
Number of people in household	Adults = 1.95 (.22) Children = 2.10 (.83)	Adults = 2.22 (1.26) Children = 2.28 (.83)
Mullen	Full Scale Developmental Quotient = 64.30 (21.93)	Full Scale Developmental Quotient = 56.38 (18.90)
ADOS	7.38 (1.83)	8.00 (1.97)
PSI (Raw Score)	85.43 (24.36) Corresponds to ~ 85%tile	81.53 (26.98) Corresponds to ~ 80%tile

Note: Rural counties were identified by the North Carolina Rural Center and have an average population density of 250 per square mile or less.

Results

- There were **no significant differences** in mean scores on the parent adherence measure between the rural and non-rural FITT group.

	Non-Rural (n = 15)	Rural (n = 13)
ADH (SD) p = .258	.812 (.14)	.86 (.08)

Parent adherence items are scored 1-5. The 8 items are summed/40 to create a value of 1, or a proportion of Parent Adherence.

- There were **no significant differences** in mean scores on the social validity measure between the rural and non-rural FITT group.

	Non-Rural (n = 14)	Rural (n = 11)
General satisfaction with FITT	4.82 (.32)	4.77 (.34)
Goals of FITT	4.71 (.45)	4.79 (.40)
Procedures of FITT	4.66 (.47)	4.75 (.26)
Perceived Child Outcomes	4.80 (.33)	4.86 (.23)
Perceived Parent Outcomes	4.67 (.39)	4.52 (.34)

- Similar results were found when examining effects of maternal education and income.

Conclusions

- Rurality was not associated with differences in other demographic variables or differences at pretest.
- The study sample may not be representative of the larger rural population.
- These findings indicate that rural and non-rural families find the FITT intervention feasible and acceptable.
- There are likely other challenges rural families face that are not quantified in these analyses (e.g. effort to find a specialist, travel time, need for reliable transportation, availability of services/providers).

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