

Snack Time Intervention for Preschoolers with ASD: Fun and Function

Background

- Children with autism spectrum disorder (ASD) experience eating difficulties more than children with intellectual disability and neurotypical children
- Up to 90% of children with ASD have feeding difficulty
- Selective eating behaviors may lead to nutritional deficit, underweight, poor cognitive development, learning and behavioral difficulty
- Picky eating behaviors caused by many factors including genetic and environmental factors, parent-child relationship, feeding style, personality factors and tactile or oral defensiveness

Specific Aims

Aim 1: To determine if child-centered snack time intervention will increase the frequency of food-related behaviors, including touching, smelling, playing with food and eating food during snack time.

Aim 1a: To examine the effect of a child-centered snack time intervention on the variety of foods eaten at home.

Aim 2: To examine the effect of a child-centered intervention on social communication including vocalizations, using eye contact, pointing, and/or smiling.

Aim 2a: To examine the effect of a child-centered intervention on appropriate mealtime behaviors as measured at home.

Aim 3: To examine the feasibility and fidelity of the snack time intervention.



Method

Single subject, Quasi-experimental design

Participants:

- Three boys and one girl with ASD, aged 3 to 4 years, recruited from the Early Intensive Behavioral Intervention (EIBI) classroom

Procedure:

- Pilot study conducted to assess fidelity and feasibility
- Play-based and child-centered snack time intervention provided in a group for 8 weeks, bi-weekly, at 10 minutes per session
- 3-4 foods offered at each session; a combination of familiar and novel foods
- Food selection determined by results from Food Frequency Questionnaire (FFQ), food allergies and parental preferences
- Sessions videotaped for scoring frequencies

Instrumentation

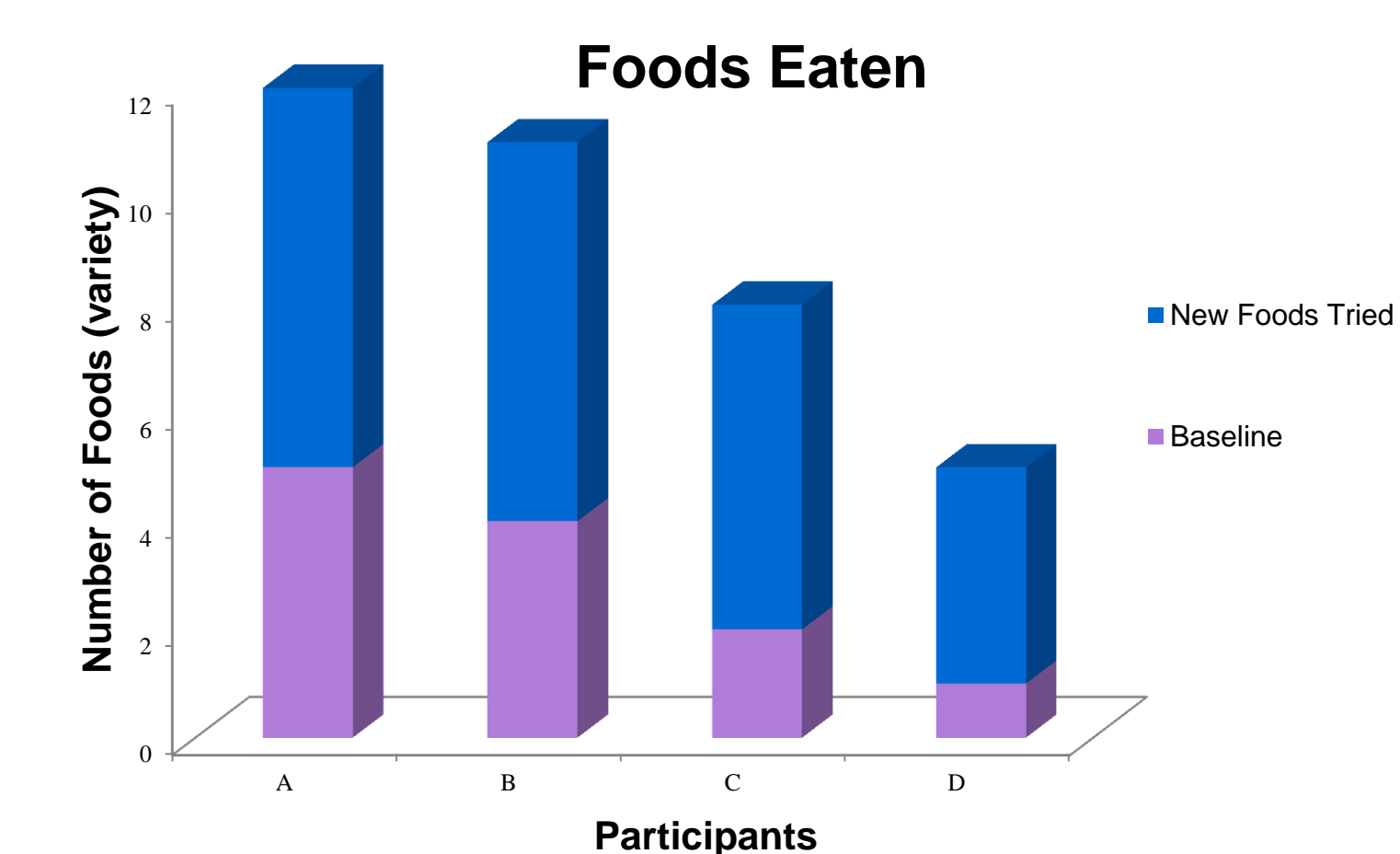
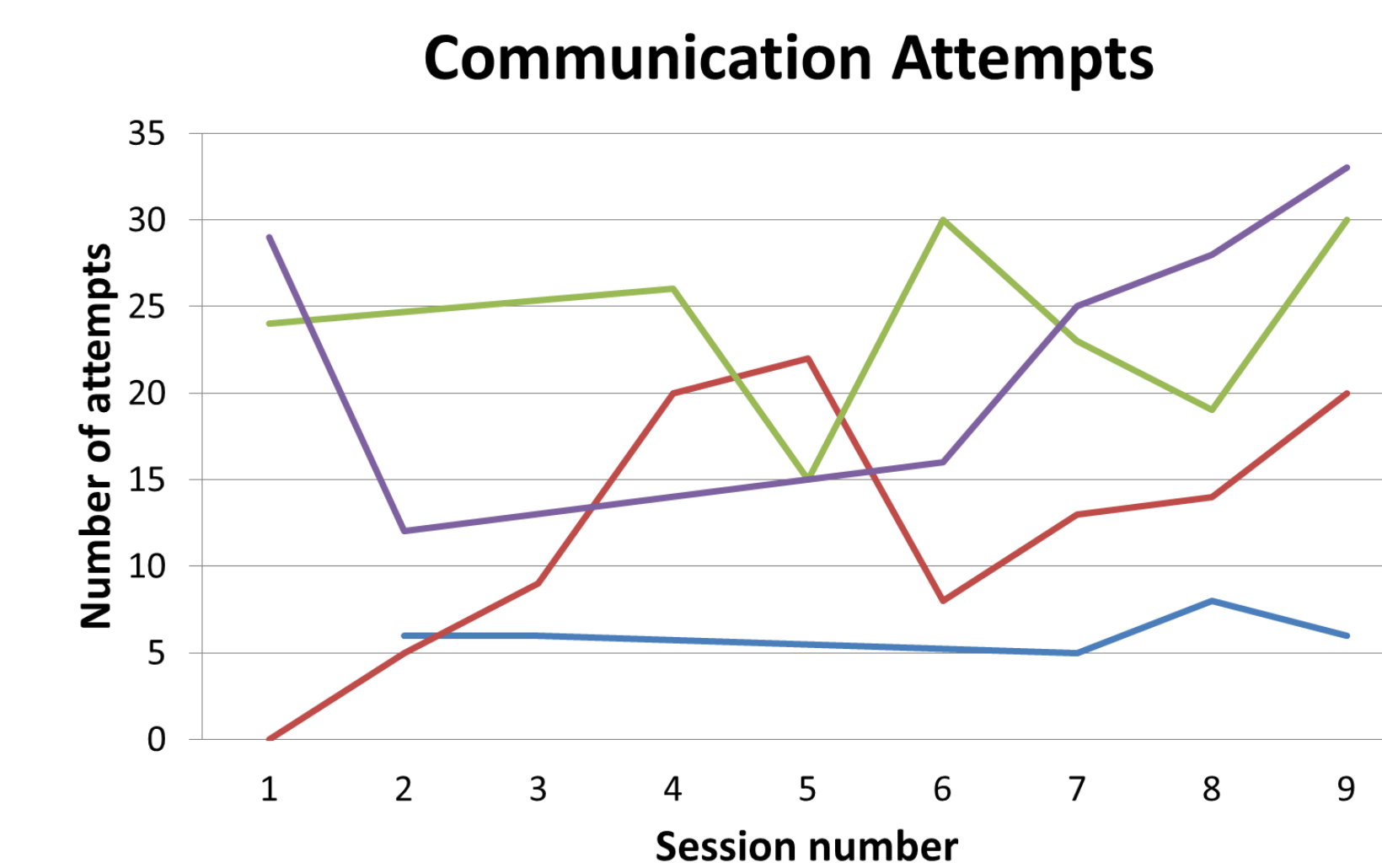
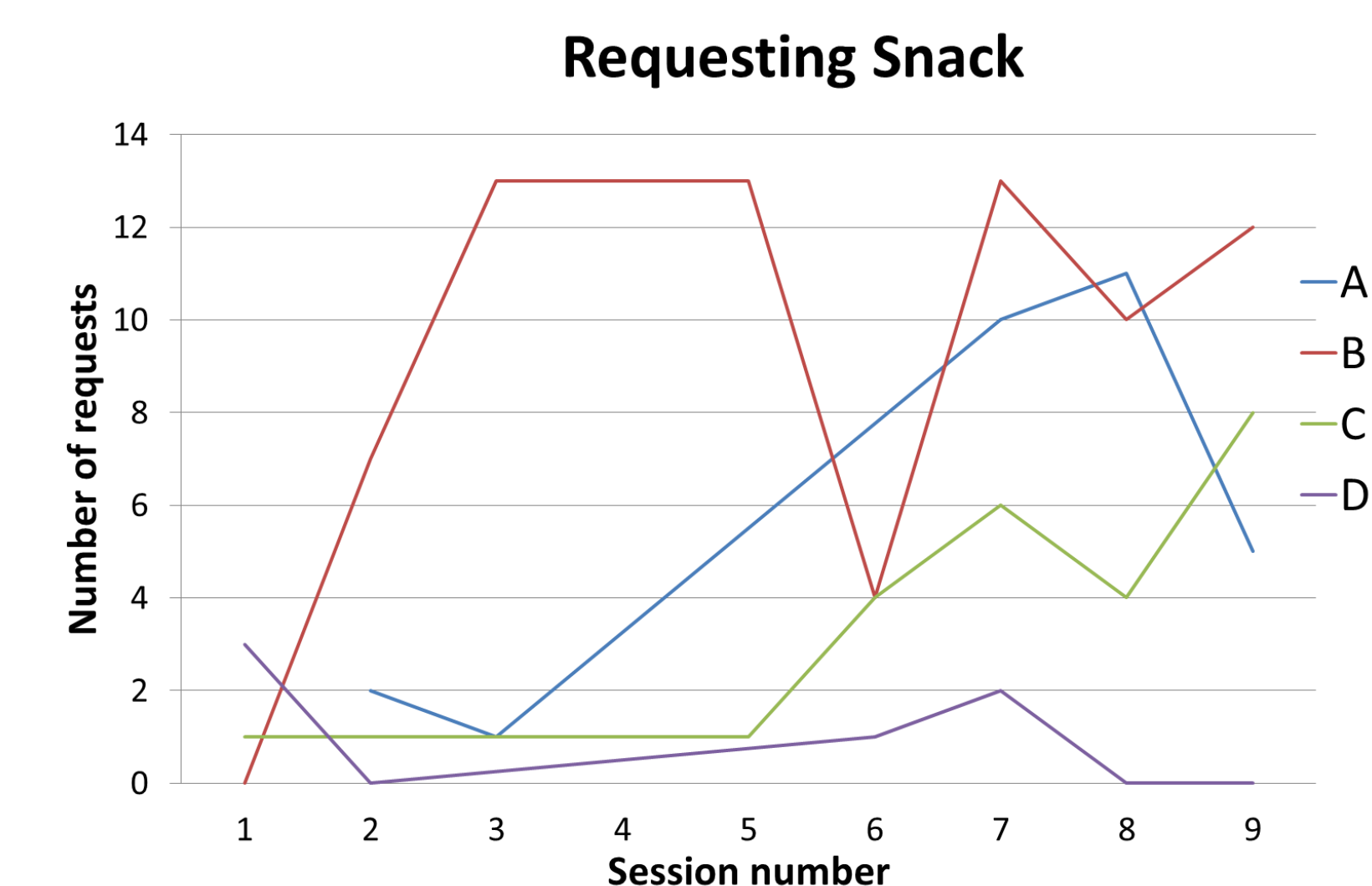
- Demographic and food familiarity Questionnaires
- Food Frequency Questionnaire (FFQ)
- Brief Assessment of Mealtime Behavior in Children (BAMBIc)
- Qualitative questions of the experience from parents



Results

Quantitative Results:

- No substantial changes in the FFQ or BAMBIc from baseline to 5 weeks
- Improvements made in requesting snacks, however, dependent on food options
- Increased communication attempts
- All children increased food variety eaten during snack time intervention



Qualitative Results:

- “Seems to know better food likes and dislikes...”
- “A little more open to new food...”
- “Helped social skills” including “eye contact...”
- “More tolerant of new foods...”
- “Will take a small bite to try a new food...”

Discussion

- Play-based, child-centered snack time increased the variety of foods eaten and explored (touch, play, etc.) as well as improved socialization behaviors.
- Frequent and ongoing food exposure is important for changing picky eating behaviors. Therefore the length and frequency of the intervention may not have been long enough to generalize in the home setting.
- Snack time provides an opportunity to build on food variety and social skills.
- The implementation of a snack time group treatment is feasible within a preschool curriculum.

Limitations:

- Food variety limited by allergies and parental preferences
- Small sample size
- Short duration of intervention
- Lost/missing data from illness, behavior, procedural error and weather

Conclusion

- Child-centered snack time intervention was effective at increasing the variety of foods eaten and improving socialization behaviors.

Future Research Directions

- Collaborate with Ohio State University, Occupational Therapy Department for aggregate data analysis
- This pilot study informed future study of the importance of parental involvement and education to generalize food exposure and socialization behaviors at home.

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