Breaking Boundaries: The Feasibility of a Telehealth-Adapted Ayres Sensory Integration® (ASI) Intervention for Autistic Children

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Abstract

Objective: Explore the feasibility and preliminary outcomes of a telehealth-adapted Occupational Therapy using Ayres Sensory Integration® (OT-ASI) protocol.[1]

Brief Methodology: Pre-post feasibility trial.

Participants: 4 families of autistic children aged 4-12 years.

Results: PEDI-CAT ASD, PDDBI, GAS, fidelity checklist all trending positively. Families report positive feasibility and acceptability.

Discussion and Conclusion: This is the first study to explore the feasibility and impact of a telehealth-adapted ASI protocol. Preliminary findings show positive feasibility and outcomes.

Background

- As a result of the COVID pandemic, telehealth emerged as a promising alternative to traditional face-to-face service delivery models:[2,3]
  - Minimizes in-person contact, reduces travel costs, and increases the timeliness of and access to services
  - Yields positive outcomes on functional skills and performance of activities of daily living
- An evidence-based manualized protocol (Occupational Therapy using Ayres Sensory Integration®[1]; OT-ASI) was adapted for remote delivery based on telehealth best-practices; and then reviewed and rated by telehealth experts and OT clinicians.
- This manual retains the core principles and active ingredients of OT-ASI, targeting the sensory motor factors impacting participation in daily life activities and routines and measures participation-based outcomes.

Participants (n = 4)

- Autistic children between the ages of 4-12 years (M = 7.25 years) recruited from a large urban outpatient setting in New York.
- Twelve families enrolled in study:
  - Four families completed the study (and two additional families in process).
  - Five families dropped out during the pre-intervention baseline testing and one after full enrollment.

Methodology

Procedures:

1. A telehealth adapted ASI fidelity measure (ASIFM) was developed and rated.[4] — **Manual**
2. Clinicians were trained on OT-ASI and completed trainings on telehealth intervention.[5,6]
3. Screening and eligibility.
4. Session 1: Pre-treatment assessments and baseline testing. — **Pre and Post Measures**
5. Session 2: Goal identification and Goal Attainment Scaling (GAS) and treatment planning.
6. Session 3-9: Intervention sessions (1-2x/week) and fidelity ratings.
7. Session 10: Intervention feasibility interview with caregivers and post-intervention GAS conducted by independent evaluator.

Preliminary Results

GAS:

- 83% of the goals set were met (M = 0.75; SD = 0.82).

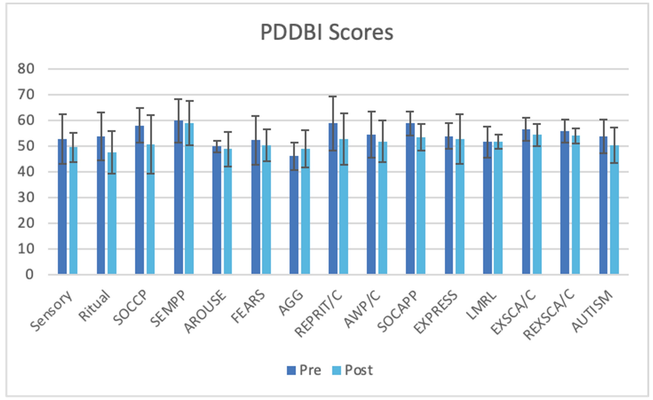
Clinician fidelity (via telehealth-adapted ASIFM):

- 100% of sessions evaluated met the baseline level criteria.

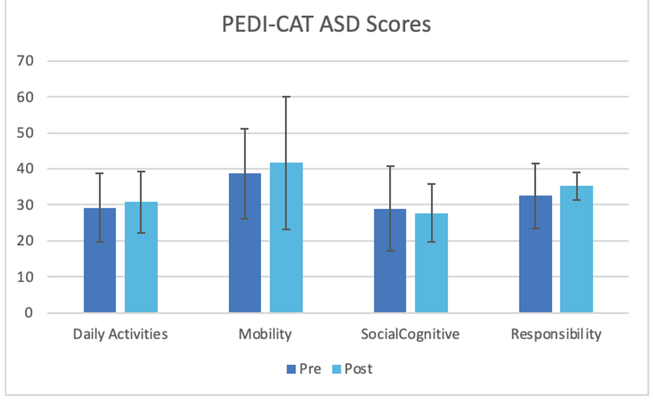
Caregiver acceptability (via interview):

- 75% of families were highly/very satisfied and reported it was feasible to participate.
  - Reported ease with scheduling, accessing/using technology, interacting, and following instructions via Zoom.
- Families indicated a preference to decrease frequency of sessions to 1x/week and reported the allotted 10 sessions were not adequate to meet their child's needs.
- The intervention provided parents with fun ways to promote home carryover, and methods of recognizing and addressing sensory needs in their children.

Preliminary Results (cont.)



Note. Scores trending toward a decrease in autism behaviors.



Note. Daily Activities, Mobility, and Social Responsibility trending in positive direction.

Discussion and Conclusion

- This is the first study to explore the effectiveness of OT-ASI when delivered via telehealth.
- Emerging feasibility and satisfaction data trend positively.
- Formal quantitative/qualitative analyses are planned.
- Further research is needed to evaluate the efficacy of this adapted protocol, develop and test performance-based telehealth measures, and determine an optimal range of sessions to meet family needs.
- Telehealth assessment of sensory integration requires further refinement and adaptation.