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Impact of the Young Athletes Program on Young Children with Autism Spectrum Disorders in Quincy Public Schools

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Introduction

The Center for Social Development and Education (CSDE) and the College of Education and Human Development (CEHD) are supporting the implementation of the Young Athletes (YA) program for preschool children with Autism Spectrum Disorder (ASD) in Quincy Public Schools.

- 50-73% of children with ASD have significant motor delays compared to normative peers (Berkeley et al., 2001; Mari et al., 2003).
- Concerns include:
 - Delays in overall gross motor skills, including manual dexterity, balance, gait, motor coordination, and ball handling skills (Berkeley et al., 2001; Fournier et al., 2010).
 - Motor development appears to slow for two- and three-year-old children with ASD (Lloyd et al., 2011; Ozonoff et al., 2008).

Young Athletes is a theoretically-based program designed to improve the motor development of children with disabilities (ages 3-7) through various motor activities. Clinical trials conducted by CSDE (Favazza et al., 2013) indicated that the Young Athletes program significantly improved the motor skills of young children with disabilities.

Objectives

1. Examine the impact of the Young Athletes program on the motor and social skills of children with ASD.
2. Document the adaptations made by teachers to the Young Athletes program to support children with ASD.
3. Support YA implementation and the continued development of adaptations to ensure sustainability for classroom teachers.



Methods

Participants

- Children: 17 (11 ASD, 2 Pervasive Developmental Disorder, 4 Typically developing peers)
- Gender: Boys - 16 (94%), Girls - 1 (6%)
- Ages: Range (37-71 months), Mean (52 months)

Settings

- Early Childhood Center, Quincy Public Schools
- Two integrated and three inclusive (CARES) classrooms were involved in data collection
 - All classrooms in the school participated in YA

Design

- Target children and teacher selection based upon eligibility criteria

Child Measures

- Peabody Developmental Motor Scale (PDMS) (Folio & Fewell, 2008)
 - Subscales: Object manipulation, Locomotion, Stationary
- Social Skills Rating System (Gresham & Elliott, 2008)
 - Subscales: Social skills, Problem behaviors

Teacher Measures

- Weekly progress logs on challenges and adaptations
- End of program survey on structure, challenges, and suggestions

Parent Measures

- YA at Home Record
- Survey on use of YA and benefits to the child and family

Procedural Fidelity Measures

- Teachers
 - Attendance
 - Teacher implementation log
 - Fidelity of implementation checklist

Results

- Average gains in motor skills of 9-11 months in about 3 months.
- Anecdotal teacher reports indicate positive changes in social and Kindergarten readiness skills.
- Teachers reported that the intervention fit within the school day and children really enjoyed it.
- Teachers reported that the flexibility of implementation of lessons and activities benefited children.

PDMS Age Equivalent Scores Before and After YA

	Before Young Athletes Athletes	After Young Athletes
Stationary Skills (age equivalent score)	38.6 months	50 months
Locomotion Skills (age equivalent score)	35.6 months	44.1 months
Object Manipulation Skills (age equivalent score)	33.9 months	44.9 months

Implications for Research & Practice

- Allowing teachers to spend additional time on lessons and activities may help children with ASD get used to the routine more quickly and lead to better gains.
- Object manipulation gains are significant for children with ASD since previous studies showed a slowing of skills during early childhood.
- Need to examine changes in social skills and Kindergarten readiness skills more closely.



Young Athletes Sample Lesson

Example Foundational Skills Unit One - Lesson One

Equipment: Scarves; Floor Markers, Balls, Cones, Beams

- 5 min. **Opening Sports Song**
- 5 min. **I Spy**
- 4 min. **Scarf Game**
- 5 min. **Inchworm Wiggle**
- 6 min. **Bridges/Tunnels**
- 5 min. **Closing Sports Song**