



Meta-Play Evaluation - Northeastern Preschool Classroom

The school setting provides ideal ground for delivering effective early childhood interventions, yet very few autism interventions have been developed for and systematically tested in a classroom setting. A district in the Northeastern United States adopted Meta-Play as its intervention for students with autism in its early childhood center.

Study Details and Results

Meta-Play Overview

Meta-Play is a play-based curriculum and assessment designed to foster imaginative thinking and pretend play and, in turn, age-appropriate communication and social skills. This curriculum offers a systematic approach to fostering the development of imagination through play-based activities. Unlike many other play-based curriculums, Meta-Play uses play as a tool to reach the outcome of increased imagination skills.

Study Participants & Measures

The 12 students receiving Meta-Play were three to five years old, predominantly of racial and ethnic minority, and met criteria for eligibility for special education under the autism category. The students were enrolled in two half-day intensive autism preschool classrooms. Their teachers received a six-hour training followed by monthly coaching visits. Teachers focused on all 14 Meta-Play activities between October and May. The implementation was tailored to work with classroom schedules. Teachers implemented a set of three to four activities over a period of four to eight weeks.

This evaluation examined communication, social interaction and imaginative use of materials using the Autism Diagnostic Observation Schedule, 2nd edition (ADOS-2), considered the “gold standard” in evaluating autism, and the Social Responsiveness Scale-2 (SRS-2) Parent Report completed in September prior to Meta-Play and in May after Meta-Play. Lower scores on these measures indicate less severe autism-specific behaviors.

A project-developed implementation rating scale completed by two trained observers was used to assess teacher engagement in Meta-Play activities in the classroom. Observations conducted by BCBA's with prior experience as classroom teachers of students with autism and other disabilities recorded student engagement in activities during the school year.

Study Results

Implementation rating scale results showed a high and moderate level of implementation fidelity in Classroom A and B, respectively.

Observation results showed 1) increased active participation in small and whole group activities, 2) increased purposeful pretend play and imaginative use of materials, 3) increased interest in group social activities, and 4) increased communication and positive social behaviors that led to expanded opportunities for positive interaction with peers and adults and inclusion in school-based activities with general education peers.



Examples of communication and positive social behaviors observed included: joining an activity or staying with an activity, using activity materials willingly or requesting activity materials, requesting turns and continuation of an activity, eye contact with peers and/or adults during an activity, initiating or responding to joint attention during an activity, and verbally or vocally participating during an activity.

ADOS-2 Results

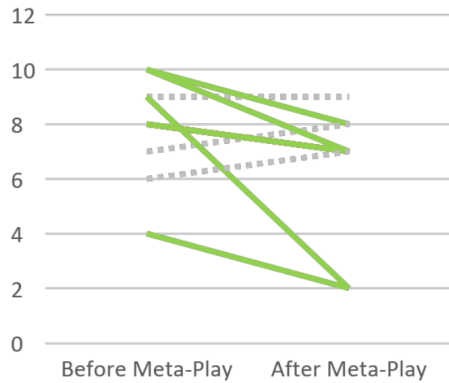


Figure 1. Change in participants' ADOS-2 Severity Scores after seven months of *Meta-Play* for 10 participants.

- Student showing a reduction in ADOS Severity Score
- - - Student not showing a reduction in ADOS Severity Score

The ADOS-2 results showed meaningful improvements in age-appropriate social behaviors including communication and social interaction. The pre- to post-intervention ADOS-2 scores showed a reduction in autism-specific behaviors for 7 out of 10 participants (see Figure 1 on the left).

The ADOS-2 scores were disaggregated by classroom. While autism-related behaviors improved in both classrooms, greater improvement was observed in Classroom A, the classroom with a higher level of implementation fidelity, than Classroom B.

SRS-2 Results

The SRS-2 Parent Report results showed a reduction in autism-specific behaviors for six out of the eight participants whose parents completed it (see Figure 2 on the right).

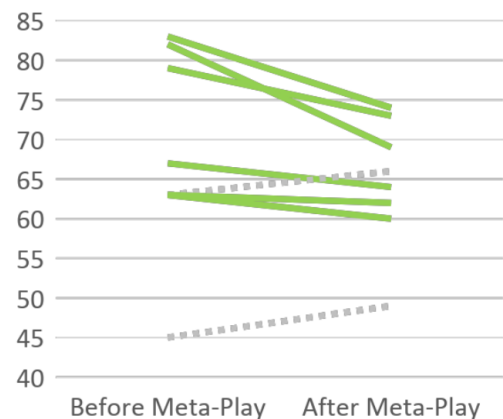


Figure 2. Change in SRS-2 Parent Report Total Scores after seven months of *Meta-Play* for 8 participants.

- Student showing a reduction in SRS Total Score.
- - - Student not showing a reduction in SRS Total Score.



Conclusion

Results from the first year of implementation showed an increase in age-appropriate communication and social skills for most students. Participating in Meta-Play provided students with many opportunities to engage with teachers and peers in a positive and meaningful way through play-based activities and develop age-appropriate social skills that are important for accessing the general education classroom and curriculum. Without a systematic approach to developing imagination skills, students may have had fewer opportunities to engage with peers and adults in play-based interactions that support the development of positive social behaviors.

