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## The Effects of a Behavior Analytic Social Skills Group on School-Aged Children's Social Skills in a Classroom Setting

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The Effects of a Behavior Analytic Social Skills Group on School-Aged Children's Social Skills in a  
Classroom Setting

An Honors Thesis submitted in partial fulfillment of the requirements for Honors in  
Psychology

By  
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Under the mentorship of *Denice Rios*

ABSTRACT

Children with autism spectrum disorder (ASD) exhibit skill deficits in several areas. One of those areas is social skills. Social skills are very important for development and learning. One common intervention to increase social skills in children with ASD is social skills groups. Social skills groups use the principles of the science of behavior to teach various social skills effectively and efficiently to children with ASD. A common setting where children's social skill deficits increase is in classroom settings. The purpose of this study was to implement a social skills group intervention in a classroom setting to increase social skills for children with ASD. Results showed that all participants increased their social skills through the social skills group intervention.

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## The Effects of a Behavior Analytic Social Skills Group on School-Aged Children's Social Skills in a Classroom Setting

Applied behavior analysis (ABA) has been used by therapists for decades to assist in the treatment of problem behaviors in children with autism spectrum disorder (ASD). The Center for Autism and Related Disorders defines ABA as “the application of the principles of learning and motivation from behavior analysis, and the procedures and technology derived from those principles to the solution of problems of social significance” (n.d.). Children with ASD often have deficits in communication, social skills, and daily living skills (American Psychiatric Association, 2013). As a result of these skill deficits, children with ASD may sometimes resort to engaging in problem behavior to get their needs met. Specifically, for children with ASD, everyday tasks such as socializing with friends, may be challenging because they lack the skills to be successful. However, using ABA therapy, these challenges can be alleviated to some extent. Over the years, countless studies have been published that explore the use of ABA with children with ASD to improve several different skills in a variety of different settings.

As mentioned previously, social skills are one common deficit in children with ASD. Often, social skills deficits are more apparent when children start school because they are expected to interact with same-aged peers. As a result, classroom settings are an excellent environment to specifically target and work on social skills for children with ASD. It is important to try to evaluate the effectiveness of different therapeutic techniques in classrooms so more schools can open with an effective strategy for improving social behaviors for children with ASD.

When implementing ABA techniques in a classroom setting, it is important to take into consideration how the ABA therapy will work alongside the everyday classroom structure. The

importance of this is detailed by Fantuzzo (1992) in a threefold description of the process of implementation. The first issue discussed in the paper is the lack of proper education and structure for troubled and challenged children in the U.S. Fantuzzo explains that the school system should be used as a base for therapeutic techniques because all children can have access to it this way and teachers provide children with the most adult interaction they will receive outside of their homes. Taking this into consideration, if teachers begin to use behavior change therapies in their classrooms, that may be the only opportunity many kids will get to receive any form of therapy to help with skill deficits related to ASD. A major reason why these practices are not already being added to regular classroom structures is the misconceptions that teachers hold toward ABA interventions (Fantuzzo, 1992). Interventions derived by ABA do not follow the typical qualifications for statistical significance that other methods use. Unlike most clinical approaches, ABA is typically tested in single-subject, situation-specific cases. This causes hesitation in teachers to fully trust in its effectiveness. Teachers also hesitate to want their classroom to be turned into an experiment or lab, which is necessary to maintain internal validity of the study. The children should see the ABA therapy as another classroom activity, and it should mesh easily with the existing structure. This is no easy feat and tends to deter teachers from allowing ABA interventions in their classes. In his paper, Fantuzzo explains a proper application of behavior analysis in a classroom setting. He suggests a collaboration between the teacher, who should remain the head of the classroom, and the behavior analyst, who should use a technique that can be maintained by the teacher after the analyst has left. Cooperation between these two individuals is essential to the success of ABA in the classroom.

Another way to successfully implement ABA interventions in the classrooms was described by Geller (1991). Specifically, Geller explained a four-tiered model for intervention

that can be applied to a classroom setting. It is based on the balance between intensity of the intervention and the cost for the institution. The lowest level is the lowest intensity and lowest cost while the highest level is the most intense. The highest level typically involves a personal intervention with one specific student/client. For a classroom, interventions should be general enough to apply to and benefit all the children at once and should also come at a low cost. Therefore, a moderate level of intensity and cost should be applied.

Taking all of this into account, one ABA intervention that would be ideal for a classroom setting is social skills groups. Social skills groups involve a group of individuals, usually diagnosed with autism spectrum disorder, who are brought together to simultaneously learn a new skill (Leaf et al., 2016). Social skills groups have been successfully used to teach a variety of different social skills, such as conversations, play skills, taking turns, and much more. One component of social skills groups is behavioral skills training or BST. During BST, teachers or trainers implement instructions, modeling, rehearsal, and feedback to teach a new skill. When used in a social skills group, the teacher or trainer delivers BST to the entire group. The combination of BST within a social skills group has shown success in a classroom. Therefore, the purpose of this study is to implement a social skills group that utilizes BST in a classroom setting to teach different social skills to students with autism spectrum disorder.

## **Method**

### **Participants and Setting**

The participants of this study were recruited from the Matthew Reardon Center for Autism (MRCA) in Savannah, Georgia. Participants were students currently enrolled at the day school whom the supervisors at the school felt could most benefit from the social skills group. A total of five participants were recruited for this study. All five participants were female and

ranged in age from 12-18. There were four Caucasian participants and one African American participant. The participants were in three different classes at the school based on their age and learning levels. The small group was conducted in a shared open area inside the school where the students had access to toys and books to play with during the intervention sessions.

### **Materials**

The students were given paper tickets as reinforcers for correct responses. At the end of each session the participants had the opportunity to exchange those tickets for prizes that had been chosen by them at the beginning of the study. Other materials included data sheets used to mark how often the correct and incorrect responses occurred and graphs that tracked the result of each session to determine if the students met mastery criteria.

### **Procedures**

We used a multiple baseline design to evaluate the effects of our social skills group intervention. Three different social skills were taught during the study. The first skill was identifying and properly responding to an embarrassed facial expression, the second was making eye contact when being spoken to and the third was identifying and responding to peers when they are confused.

**Baseline.** A probing session was conducted before starting intervention for each social skill to determine baseline scores for each participant. Probing was conducted by allowing the children to play with a toy or book of their choice and one-by-one testing their ability to identify and respond to facial expressions or make eye contact. Each probing session was completed on its own day before intervention sessions started the following day.

**Behavior Skills Training.** Following completion of baseline probes, the intervention sessions began. Sessions lasted an hour each and consisted of an individual play period and a

group period in which the students all came together to aid in sociability between students. At the beginning of each new skill, the students were asked to show the researcher what the facial expression looked like on their own faces and then the researcher gave an example on her face as well as showing videos of other people expressing that emotion. The researcher then delivered instructions to the group by informing the students of the correct response to the facial expression informed. After the instructions, the researcher modeled the correct way to respond to the facial expression. After the model, the researcher had the students rehearse the correct response individually. Once the students had rehearsed the correct response, the researcher provided the student with immediate feedback. If the student responded correctly, they were given a paper ticket. If the student did not respond correctly the researcher reminded them of the correct response and tried the process again. A correct response was noted with a “+” on the data sheet and an incorrect response was marked with a “-”. Students were tested a total of five times per session. The number of correct responses was calculated into a score out of 100 for each session. The mastery criteria for completion for each skill was set as >80% across three sessions. Once the mastery criterion was met for each student, the researcher moved on to the next skill.

## **Results**

Overall, all five participants met the mastery criteria for each target behavior. Over the course of the three-month research, each participant mastered the skills within 5 days of interventions. The participants showed similar improvement across each skill and compared to each other within every skill. This allowed the researcher to maintain a steady schedule, only moving onto the next skill once each participant had mastered the skill before.

**Participant 1 (P1).** During the baseline data collection, participant 1 showed low levels of skill accuracy for responding to “embarrassed” (M= 0), “bored” (M=33) and “confused” (M=0). Following social skills intervention, participant 1 showed an increase in accuracy of responses, meeting the mastery criteria for each skill by maintaining 80% accuracy across three sessions. Participant 1 did not need intervention for eye contact because they scored 100% during the baseline probe. Additionally, participant 1 showed some problem behaviors in the beginning by struggling to maintain focus on the researcher while working on intervention stages. To help with this problem behavior, the researcher created a separate portion of the participant’s play time called “question time” in which participant 1 and the researcher sat separately from the rest of the group and asked each other questions back and forth. This allowed participant 1 to have a structured time to focus, during which the intervention could take place. After “question time” was over, participant 1 was allowed to return to her play activities.

**Participant 2 (P2).** Participant 2 demonstrated a high level of accuracy when baseline tested for responding to the facial expression “embarrassed” (M=100). Participant 2 showed low levels of accuracy during baseline tests for responding to “bored” (M=33), and “confused” (M=0). Following social skills intervention, participant 2 showed an increase in accuracy of responses, meeting the mastery criteria for each skill by maintaining 80% accuracy across three sessions.

**Participant 3 (P3).** Participant 3 demonstrated moderate levels of accuracy during baseline for responding to “embarrassed” (M=50). Participant 3 showed low levels of accuracy during baseline tests for “bored” (M=0), and “confused” (M=0). Following social skills intervention, participant 3 showed an increase in accuracy of responses, meeting the mastery criteria for each skill by maintaining 80% accuracy across three sessions.



**Participant 4 (P4).** During the baseline data collection, participant 4 showed low levels of skill accuracy for responding to “embarrassed” (M= 0), “bored” (M=33) and “confused” (M=0). Following social skills intervention, participant 4 showed an increase in accuracy of responses, meeting the mastery criteria for each skill by maintaining 80% accuracy across three sessions (?). Participant 4 was given an extra intervention to help learn eye contact skills to better accomplish the goals of the other interventions. Participant 4 showed low levels of accuracy during baseline tests for eye contact (M=0). Following interventions, participant 4 showed an increase in accuracy of eye contact levels maintaining 80% over 3 sessions to meet mastery criteria.

**Participant 5 (P5).** During the baseline data collection, participant 5 showed low levels of skill accuracy for responding to “embarrassed” (M= 0), “bored” (M=33) and “confused” (M=0). Following social skills intervention, participant 5 showed an increase in accuracy of responses, meeting the mastery criteria for each skill by maintaining 80% accuracy across three sessions. Participant 5 was given an extra intervention to help learn eye contact skills in order to better accomplish the goals of the other interventions. Participant 5 showed low levels of accuracy during baseline tests for eye contact (M=0). Following interventions, participant 5 showed an increase in accuracy of eye contact levels maintaining 80% over 3 sessions to meet mastery criteria.

## **Discussion**

The goal of this social skills training was to teach each student new social skills that they can use in their everyday interactions. The specific skills taught during the research were identifying and correctly responding to facial expressions of embarrassed, confused, and bored as well as increasing eye contact when in conversation. These newly learned skills will be able to

generalize outside of the social skills group to help better communication in their classrooms, at home, and with their peers. Even though the social skills program was effective at increasing social skills for all five participants, participant 1 needed extra support to address problem behaviors. Future researchers should look at how they can modify their social skills training groups to ensure appropriate support for problem behavior. Additionally, during the social skills group, participants also had an opportunity to engage in a group activity not related to the specific skills they were working on. This led to more opportunities for the participants to practice collaboration and other group skills which enhanced their experience. Overall, this study has shown that social skills groups can be an effective means of increasing social skills in a group setting for children with autism. This form of social skills training can and should be used in a classroom setting to help teach social and other important skills because it is efficient and effective.

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