SOCIAL COMPETENCE INTERVENTION IN AUTISTIC SPECTRUM DISORDERS (ASDS) - A CASE STUDY

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The purpose of this case study was to determine the effectiveness of a combined intervention in remediating the social skills in a first-grader with a disorder from the autism spectrum disorders (ASDs). The researcher also aimed to identify the changes observed during the intervention period. The combined intervention consisted of reading personalized Social Stories that targeted specific social skills and peer mediated intervention. The intervention took place for a period of eight weeks. In order to determine the effectiveness of the intervention, the researcher compared the teachers' ratings on the Social Behaviour Assessment Inventory (SBAI) (Stephens, 1992), data gathered from the Conditional Probability Record (Steege, & Watson, 2009), and informal interviews conducted with the teachers and mother before and after intervention. The results showed that the combined intervention did improve the targeted social skills; there was an increase in target behaviours post intervention and a minimal improvement in the rating scales. Based on the results, implications and recommendations for future research were drawn.

In a typical school setting, it is customary to see mainstream and special needs children interacting with each other, they may be sitting next to each other in class, sharing their supplies, and whispering or giggling at times. During recess, they would sit together on a bench sharing their meals, or even playing tag. However, not all students with special needs are able to socialize with their peers, especially those with deficits in social skills. They tend to sit alone during lunch breaks, are likely to observe others play, or may simply sit on the lawn and browse quietly through a book. These common behaviors are usually manifested in children diagnosed on the Autistic Spectrum Disorders (ASDs).

Autism spectrum disorder (ASD) is viewed as a term that includes Rett disorder, childhood disintegrative disorder (CDD), autistic disorder, pervasive developmental disorder not otherwise specified (PDD-NOS), and Asperger syndrome (Ben- Arieh& Miller, 2009; Sicile-Kira, 2004). The common characteristics between people on this spectrum are that they have difficulties in social interaction, communication, and imaginative thinking (Pittman, 2007). Additionally, AS is currently understood as *a developmentaldisorder characterized by significant difficulties in social interaction and emotional relatedness and by unusual patterns of narrow interests and unique stereotyped behavior* (Church, Alisanski, &Amanullah, 2000, p. 12). Children with deficits in social competence demonstrate a restricted range of social communication skills such as limited ability to (a) initiate and maintain conversations, (b) request information/materials from teachers and/orpeers, (c) listen to and respond to teachers and/or peers,and (d) interact in basic games or other activities (Carter, Klin, Ornstein-Davis, Volkmar 2005; Bray, Hanley-Hochdorfer, Kehle, 2010). People diagnosed with this disorder often suffer from impairments in social interaction and communication; they are unable to sustain friendships and engage in limited social activities (Krauss, Orsmond, Seltzer, 2004).Currently, there is no test to accurately diagnose ASDs. Hence, diagnosticians have to solely rely on observation of behaviors, a person exhibits, a procedure that remains highly subjective in the absence no clear criteria leading to a differential diagnosis (Sicile-Kira, 2004).

As for Asperger's syndrome which has previouslybeen defined as a deficit difficulty with social relationships, including problems with nonverbal behaviors (eye contact, facial expressions, and body gestures), difficulty sustaining peer relationships, and problems with social reciprocity (Clikeman, 2007).

Although formerly it was once considered a rare disorder,todaypresent the prevalence rates of AS is estimated between 30 to -60 in 10,000 cases. Originally, AS was identified diagnosed in males only, but more recent research has confirmed its presence in females, albeit to a lesser extent (Finkelmeyer, Sebrechts, Stewart, Trepangnier, Woodford, 2006).

Although ASDs are generally regarded as a lifelong disability, the variability and severity of the symptoms make it challenging for specialists to determine its prognosis (Ben- Arieh& Miller, 2009). However, there is general agreement that IQ, language skills prior to the age of five, degree of impairment, early intervention, and level of available therapy are all indicators of how the individual will fare (Ben- Arieh& Miller, 2009).

As is a disorder that is not well characterized. Previous work has shown no clear-cut distinction between AS, High Functioning Autism (HFA), and Nonverbal Learning Disorder (NLD) (Yalof, 2007; Clikeman, 2007). Children with HFA have problems with social interaction; lacking a close circle of friends doesn't seem to bother them. On the other hand, children with NLD and AS desire social interaction with friends (Clikeman, 2007). NLD overlaps considerably with Asperger's but not as much with HFA (Clikeman, 2007). Table 1 provides a summary of the similarities and differences found in the literature. Still, it is accepted that these children have difficulties in three areas of functioning: social interaction, communication, and imaginative thinking (Pittman, 2007). Children with deficits in social competence demonstrate a restricted range of social communication skills such as limited ability to (a) initiate and maintain conversations, (b) request information/materials from teachers and/orpeers, (c) listen to and respond to teachers and/or peers,and (d) interact in basic games or other activities (Carter et al., 2005).

There is no specific test to diagnose ASDs. As such, any diagnosis is based on observable characteristics that a person exhibits. It should be noted that pioneers may be skeptical about the diagnosis since it tends to be based on observations, and observations may be somewhat subjective (Sicile-Kira, 2004). However, there is a general agreement that an eclectic approach is recommended when working with individuals with ASDs; these interventions include: individual and family psychotherapy, psychopharmacology, special education, occupational therapy, and speech and language therapy (Ben-Ariech& Miller, 2009; Elder et al., 2006). The research provided in this review focused on the recommended interventions for remediating social skill deficits by special educators.

Interventions that have addressed deficits in acquisition of social skills include social stories which aim at teaching the children explicit unspoken rules through stories and pictures (Ben- Ariech& Miller, 2009). Social stories may be applied to a wide range of social situations and can be created depending on the child's needs. These stories usually have descriptive sentences about the setting, characters, and their feelings; they also give direction in regard to the appropriate responses and behaviors (Sicile-Kira, 2004). Sansosti and Powell-Smith (2006) examined the effects ofindividualized social story interventions on the social behavior of three children with AS. The social stories were read, and a direct observation of the participants' was conducted three times per weekduring unstructured school activities,such as recess. Data revealed an increase in the social behaviorof two of the three participants when the treatment was implemented.

Although several studies have found social stories to be an effective intervention when it comes to greeting people appropriately (Denning, 2007) and reducing levels of inappropriate behavior(Scattone, 2002), many of the previously conducted studies aimed at increasing pro-social behaviors through decreasing problematic behaviors (Sansosti& Powell-Smith, 2006). Additionally, while social stories have benefited many students, there is little empirical evidence related to the use of social stories to increase social and communicative behavior in school settings (Hanley-Hochdorfer et al., 2010). For example, Delano and Snell (2006) used social stories as an intervention to increase social interactions in three elementary students, in a controlled resource room. The results of the study showed that the three participants demonstrated improvement in the resource room; however, two out of three generalized their social behaviors to the mainstream classroom.

Another type of intervention is through increasing fluency of appropriate social behaviors through exposure and practice using ''social scripts,'' where adolescents may carry index cards that include various responses for different situations. In one study, a group of adolescents with AS and HFA were assigned to groups (Fombonne, Meng, Strulovitch, Tagalakis, &Tse, 2007).They met for two hours a week for a period of 14 weeks wherethey were taught social skills through role-play.The members practiced the new skill in pairs, one pair at a time, while the rest of the group watched and gave feedback.

In brief, the results of this study indicated that participating in social skills groups can be effective in helping adolescents with ASD develop comfort and confidence in social interactions. Parents' positive feedback suggested generalization to other settings (Tse et al., 2007).

A study conducted by Bock (2007) examined the effect of the social behavior learning strategy SODA (Stop, Observe, Deliberate, and Act) with four elementary school children diagnosed with AS. The students were required to read stories that incorporate the SODA strategy. After the intervention took place, maintenance probes occurred once a month for 5 months. The participants benefited from the SODA intervention; they showed good improvement in time spent learning cooperatively, playing organized sports games, and interacting with others during lunch time when SODA training began.

Another study was conducted to evaluate the efficacy of two social skills intervention programs that were implemented on 6 to 11 year old children with HFA and AS (Owens et al., 2008). The two programs were LEGO and Social Use of Language Program (SULP). SULP used a clear curriculum and a hierarchical learning approach to teach social and communication skills. Teaching started by reading novels about monsters that encounter social difficulties and progressed to adult modeling. The children then practiced and played games within the group setting and then moved on to new situations to encourage generalization (Owens et al., 2008). On the other hand, LEGO therapy was a social skills intervention for school-age children. The program was based on collaborative LEGO play, whichused the child's natural interests to motivate learning and behavior change. A typical LEGO therapy project aimed to build a LEGO set, importantly with a social division of tasks. In a group of three people, the individuals had to communicate and follow specified rules to complete the LEGO build. Each collaborative activity required verbal and non-verbal communication, collaboration, joint problem solving, joint creativity and joint attention to the task.Results showed that the children who participated in LEGO therapy improved more than the other group on autismspecificsocial interaction scores (Owens et al., 2008).

Bearing these studies in mind, research showed that natural teachingstrategies used to improve social interaction between children with ASDs and their peers were designed onthe basis of incidental teaching, 'social stories', and/ or simple peer modeling(Hyun-Jin Choi&Nieminen, 2008). A variety of peer-related strategies have been developed to improve the social functioning of children on the autism spectrum. Peer-mediated strategies typically involve the use of socially competent peers to model and reinforce appropriate social behavior (DiSavlo& Oswald, 2002). An example of peer mediated intervention was provided by Kamps et al. (1994) who examinedthe peer tutoring approach using a multiple baseline across participants with reversal design. Participants included three 8- and 9-year-old boys with autism who were high functioning in terms oflanguage and intellectual abilities butlacked social competence, and all otherchildren in a third-grade classroom. Tutoring sessions resulted inan increase in interaction from 80 to 120 secondsper 5-minute sample for the threechildren with autism. Additionally there was an increase in themean interaction time of peers,and the children with autism displayed improved academic achievement (DiSavlo& Oswald, 2002).

Laushey and Heflin (2000) investigated this approachwith two five-year-old children diagnosed with ASD. These children had adequate language skills and couldread at the kindergarten level, but suffered from weak social competence. The results indicated that the childrenwith autism increased their social interaction by 36% and 38% respectively during the treatmentphase, as compared with thebaseline phase, in which children attended regular classes but were not assigned a buddy (DiSalvo& Oswald, 2002).

Various interventions were found to be effective in teaching social skills to children on the spectrum; however, little research combined the use of social stories and peer mediated intervention, especially in Lebanon. Thus, a combined intervention consisting of social stories and peer mediated intervention will be used to remediate social skills in this case study.

Purpose and Rationale
Recent data suggests that the number of students identified with AS and HFA has increased dramatically over the last few years, especially in general education settings (Myles, 2005; Sansosti& Powell-Smith, 2006; Steyaert& Marche, 2008). Thus, it has imperative for general education teachers and special educators to become acquainted with effective r strategies to help these students experience successful inclusion.

The purpose of this case study was to remediate social skills in a first grader who attends a mainstreamed classroom (inclusive setting) in an urban school in Beirut using social stories and peer mediated interventions to increase adaptive behaviors in a child diagnosed with a form of ASDs.

Interventions for Students With AS
Many researchers have documented the effectiveness of peer mediated intervention programs that improve social skills, such as LEGO (LeGoff 2004; LeGoff and Sherman 2006) and Social Use of Language Programme (SULP) (Baron-Cohen, Granader, Humphery, Owens, 2008). Peer mediated interventions in the form of peer tutoring and cooperative learning, tend to improve social competence and increase participation (Barbetta, Delquadri, Kamps, Leonard, 2002). An increase in the amount of time engaged in social interactions was fairly documented (Constantino, Friesen, Przybeck, & Todd, 2000).

Social stories, on the other hand, are short tales that describe specific social situations and appropriate responses (Gray, 1998). Social stories have proven effective in targeted social skills in children with ASDs, namely greeting people appropriately, improving positive social interaction, asking for help, and increasing the frequency of social communication through eliminating problematic behaviors such as spitting and yelling (Sansosti& Powell-Smith, 2006). Lastly, stories teach the child how to identify social cues that are prerequisites to specific desirable behaviors (Greenway, 2000). Empirical evidence on the effectiveness of social stories in school settings is somewhat limited (Hanley-Hochdorfer, 2010). The following questions were explored:

1. What are the effects of a combined intervention consisting of peer mediated intervention (pairing social and average to high achieving children with a child with impaired social skills on school projects) and reading personalized Social Stories (that target student's class participation) on a child with impaired social skills?
2. What are the observable changes during the intervention period and hypothesized explanations?

Hypothesis
It was hypothesized that using an intervention composed of peer mediated intervention on academic tasks and reading social stories improves targeted social skills in this particular first grader. It was hypothesized that there will be an improvement in the teachers rating scale after completing the intervention.

Peer mediated intervention involves the use of socially competent peers to model and reinforce appropriate social behaviors in natural settings. In this pairing, socially competent peers are paired with a child with ASD to promote social skills through incidental learning (DiSalvo& Oswald, 2002).

Method
Participants
The primary participant was a seven-yearold (first grader) boy with ASD, who is referred to as Adam. The secondary participants included three of his classmates from Grade 1 who were considered typically developing peers (both socially active and average to high achievers academically); his homeroom teachers, special educator, and mother. Peer participation was based on individual voluntary participation onschool projects during enquiry lessons. Children who participated did so whenever they wanted to, without constraint, thus reflecting natural school interactions.

Adam is a Lebanese student who lives with his family consisting of his parents and two siblings. Adam is currently attending a regular first grade class (inclusive setting). He also receives help from a special educator twice a week. Adam has been assessed three times; twice by educational psychologists and once by a speech therapist. While there was no definitive diagnosis, the specialists agreed that Adam appears to meet the criteria for ASD.

Adam was selected to participate in this study because he displays weakness in social skills and he demonstrates the basic reading skills necessary to read the social stories.
Consent was given by Adam's parents and staff at the school, in accordance with the usualprocedure for ethical guidelines.

Research Design
In this intrinsic case study, A-B-A Single- Subject Design was used to study changes in the behavior of a student with ASDs who was exposed to a social intervention program. A single- subject design was specifically chosen for this study because it is commonly used to study changes in an individual's behavior while being exposed to an intervention or treatment (Fraenkel, &Wallen, 2006). The primary benefit of using the A-B-A design is that the statement of change is strengthened when the behavior is maintained after stopping the intervention (Tillman & Burns, 2009).

An initial baseline phase was designed to gather information about Adam's social behavior. During this phase, Adam's teachers were asked to fill out the Social Behavior Assessment Inventory (SBAI) rating scale, the researchers observed and documented Adam's social interactions using the Conditional Probability Record (CPR), and informal interviews were conducted with the teachers and mother. Following this phase was the intervention phase that took place during eight weeks. During the intervention phase, the researchers read a social story with Adam every Tuesday, and a cooperative group work activity took place every Friday. Finally, a week after discontinuing the intervention, a follow-up phase was allowed to measure the changes in Adam's social interaction. Similar tools to the ones in the baseline phase were used in the follow- up phase, namely the SBAI rating scales filled by the teachers, observations of Adam's behavior and documentation of his social behavior using the CPR.

Materials and Instruments
Social Stories
Social Stories are individualized short stories that describe specific social situations and provide specific desired responses (Gray, 1998).These short stories are used to help individuals with ASDs interpret and understand situations that may be confusing to the child (Kincaid, Powell-Smith, Sansosti, 2004). The selected social stories were designed or chosen depending on the target skills that need remediation. The target skills were identified after gathering information about the student's behavior from observations conducted by the examiner and interviews with the parents and teachers. Social stories were designed to address the following identified target behaviors that need remediation: raising one's hand to ask a question, sharing items, talking to the teacher, asking questions, asking for help, greeting people and introducing one's self, and joining in on activities. The social stories were individualized booklets. Each booklet is 4 to 5 pages long; these pages include brief sentences and some pictures. The types of sentences used in the stories are the following: (a) descriptive sentences, which identify the contextual variables of the target situation (example: sometimes, recess is on the playground); (b) directive, which assist in describing a desired behavior in response to a social cue or situation (example: I will try to say things like *good job* or *nice drawing*); (c) prescriptive, which describe the reaction and feelings associated with the target situation (example: there are other kids who like to play with me during recess); (d) affirmative, which express shared belief within a given society (for example, this is a good habit) (Sansosti et al., 2004). The content of the stories was based on information collected through indirect measures such as interviews with teachers, observing the child in various settings, and data collected from the child's school records and assessment reports.

Social Story Journal
The researchers kept a journal; during or after each social story session, the researcherswould take notes on the student's behavior. Keeping a journal allows the researchers to monitor Adam's progress, document the child's questions or responses, and record the level of difficulty he is experiencing.

Social Behavior Assessment Inventory (SBAI)
The SBAI isdesigned by Thomas M. Stephens, and Kevin D. Arnold, and published by Psychological Assessment Resources, Inc. The SBAI measures the level of social behaviors exhibited by children and adolescents in classroom settings. This assessment is appropriate for children between the ages of 5 and 15.It consists of 136 items that describe social skills commonly observed in the classroom. A teacher, counselor, or parent who has observed a student's behavior rates each item on a 4-point scale describing both the presence and level of the behaviors exhibited by the student; teachers were asked to complete a rating scale immediately before and after intervention period which was the Social Behavior Assessment Inventory (SBAI)(Stephens, 1992).

Functional Behavioral Assessment
Functional Behavioral Assessment (FBA) was used to identify and evaluate the variables that trigger particular behaviors. Both an indirect and direct FBAs were conducted. The indirect FBA consisted of gathering information through semi-structured interviews and through the SBAI rating scale. The direct

FBA consisted of using the Conditional Probability Record (CPR) to monitor the child's behavior. CPR was used to observe and record the antecedents and consequence of a behavior. This type of observation is usually beneficial when the likelihood of the occurrence of particular behaviors is targeted (Steege& Watson, 2009).

Procedures
Ethics
The present study was conducted following the ethical guidelines set forth by the Council for Exceptional Children (CEC) (Rumrill& Cook, 2001). Prior to initiating the study, a formal meeting was conducted with the child's parents, special educator, and homeroom teacher. The purpose of the meeting was to provide the parents and teachers with the purpose of the study, and a description of the procedure. Parents were informed about the benefits of the intervention, and were given the option of withdrawing their son from the study at any time and for any reason. After conducting the meeting, the parents were asked to sign an informed consent. Privacy and confidentiality were assured through the use of a pseudo (Adam).

Baseline. The researchers gathered information about the student's behavior though informal and semi-structured interviews with the teachers and school counselor. Additionally, the special educator and two regular teachers were asked to fill out a SBAI rating scale. Finally, the target behaviors or skills that needed remediation were also taken from child's school records.

Additionally, the researchers observed Adam during the course of his usual school activities. The observation took place twice a week for two weeks. The students were observed for 15 minutes, during different times of the day. The observer used a 15 second interval while recording the data. Additionally, the observer was required to mark the occurrence of target behaviors using the Conditional Probability Record (CPR) (Steege& Watson, 2009).

Intervention. After the first two weeks of initial observations (the baseline phase), a transition was made to the intervention phase. The researchers used social stories and cooperative group work during this phase. Once a week, a personalized social story was read to the student. The social story targeted the specific skills that need remediation. They were designed in accordance with research based guidelines and recommendations (Gray, 1993; Denning, 2007).

Once a week, the teacher grouped Adam with 3 typically developing peers on a group project. The teacher took10 minutes to explain what the project was about and assigned roles for each group member. The assigned roles were changed each week. Cooperative learning groups were based on incidental teaching, making use of academic projects using simple peermodeling, with the use of direct instructions and guidance of the special educator. Each project required verbal and non-verbal communication, collaboration, joint problem solving, joint creativity and joint attention to the task. The teacher was the mediator between the children. She also emphasized the importance of certain behaviors while the students were working by taking advantage of this natural setting to positively reinforce Adam's behavior verbally or simply give direct instructions to guide him.
Implementation of the social stories and peer mediated intervention also took place for a period of eight weeks.

Follow-Up. A week after completing the intervention, Adam's social behavior was observed both in the classroom and on the playground. The observation took place three times a day; two days per week, for two weeks. The observer was required to mark the occurrence of targeted behaviors using 15 second partial interval recording (similar to that used during the baseline phase).
Additionally, during the post-assessment phase, three teachers were asked to fill out a SBAI rating scale. Also, an informal interview was conducted with the teachers and parent in order to get more details on their feedback.

Data Analysis
A detailed description of Adam's social behavior during the baseline phase was documented through observations using CPR, notes taken by the researchers, and informal interviews conducted with the mother and teachers. Based on the collected data, the target skills that need remediation were identified. The combined intervention was then implemented for a period of 8 weeks. The researchers used a journal to document Adam's behavior during the intervention phase. Finally, after completing the intervention, a second observation similar to the one conducted in the baseline phase was implemented and the teachers

were asked to fill the rating scales for a second time. The differences in behavior and scores were documented. The changes that were maintained in Adam's behavior during the generalization period were provided. Moreover, visual illustrations were presented in order to compare Adam's target behaviors pre and post intervention. The graphs were plotted based on the frequency of target behaviors. An analysis and synthesis of the documented data, in both the journal and graphs, was discussed. Lastly, a summary of the results collected from the rating scales filled by the teachers, observations conducted, and informal interviews was provided.

Results
Behavioral Changes Observed During Social Stories Sessions
Adam was very cooperative throughout the story reading sessions. During the first few encounters, he was somewhat coy. However, towards the second week of one-to-one sessions, he became more outgoing. In almost every session, Adam would come to the classroom door and greet the researchers, ask permission to go to the library and read a book several times. Adam was capable of remembering the main investigator's name (Noor) by the second week.

During the story sessions Adam was capable of reading the stories fluently: he could recall the main ideas of previously taught stories, answered comprehension questions related to the text. Adam could answer the examiners' questions most of the time; however, it should be noted that he did not use complete sentences. It was much easier for him to give one word answers or fill in the blanks. For example, the researchers asked him, *After borrowing something what do you do?* Adam looked and did not respond. However, when the question was rephrased to *After borrowing something do you keep it or return it?* He said, *Give it back*.

Adam was also capable of expressing himself using gestures. For instance, when he read the text related to asking questions, he raised his hand to show how he would ask his teacher a question. Also, when he saw a picture of a boy changing his clothes, he covered his mouth and said *impolite* in Arabic. However, he was not able to elaborate why it was impolite. In another session, Adam pointed to a picture of a child smiling and said *happy* while grinning, then pointed at a child frowning and said *sad* while pressing on his teeth.

At times, Adam made statements which didn't seem to make much sense and were out of context. He also tended to mumble words that were not clear to the examiner, and when asked to repeat what he said he would not. When the teachers were asked if they noted similar behaviors in the classroom, they mentioned that they did and they assumed that this was because Adam was very much affected by the weather. His mood changed when it used to rain; he would become inattentive and somewhat restless. Based on the notes in the journal, Adam did become restless and distracted by the rain; however these *random statements* were not only made on rainy days.

During the library sessions, Adam tended to sit next to the researchers. He usually put his head on her shoulder and played with her scarf or sweater while reading the story. Adam was capable of asking if he could go to the restroom during one of the sessions. On one occasion, the main investigator forgot her pen on the table after the session ended; so he walked back to the table and got it for her saying, *Your pen*. The friendly relationship that was documented in the journal contradicted some of the information in one of Adam's assessment reports. For example, according to his report Adam avoided any physical contact and preferred sitting far from others. One possible explanation for his behavior during story reading sessions is that he must have felt comfortable with the reader and enjoyed the story sessions. Perhaps Adam became familiar with the routine that took place every Tuesday, which in turn, made him feel at ease. Another possible explanation is that some kids act differently when they are being observed by strangers in unfamiliar settings.

Towards the last few sessions, some minor changes were noticed in Adam's behavior. Adam became more expressive, and tried to initiate conversation on several occasions. For example, the investigator came to pick him up one day, so he grabbed her hand and walked her towards his desk. He then showed her a picture he drew of a fire with flowers and trees around it. He pointed at the drawing and labeled the items he drew and then said, *Forest*. The researchers also noticed that Adam became friendlier towards others. For example, Adam started to greet the librarian upon entering the library. Also, on several different occasions, he greeted teachers walking in the hallway. However, it should be noted that Adam exhibited minimal eye –contact and used phrases (instead of complete sentences) while talking to others.

In conclusion, the general impression obtained from the documented data in the journals is that Adam progressed from being relatively reserved to increasingly more sociable. A difference in his pro-social behavior towards others was also evident (e.g., greeting the librarian). Although some positive changes were observed in Adam's behavior towards others, we cannot conclude that these changes were secondary to the intervention. Several external factors may have influenced Adam's behavior, such as his increased comfort level with the researchers or even maturation.

Behavioral Changes in Response to Peer Mediated Intervention
Although Adam seemed to be very confident and comfortable, he was not able to verbally present his work in a fluent way. When given oral prompts, Adam was able to answer questions. Adam's only verbal initiation was when he asked his friend what he was doing. Perhaps the reason he was able to do this is because he was asked this particular question several times.

Adam was more of a passive group member. It seems as though he benefited from group work because he was able to imitate his peers when he was not sure about what he was supposed to do. It cannot be concluded that Adam was capable of completing the task; however, he wasn't able to take the leading role in any of the group activities.

Adam's Social Communication Progress
Frequencies of the occurrence of targeted behaviors were gathered, through observations, using the Conditional Probability Record (CPR) which is part of the Functional Behavioral Assessment (FBA) process. So, every 15 seconds the researchers would look at Adam to see if he was engaged in a target behavior. If he was, the researchers noted the antecedent (what took place before the incident or what lead to it) and the consequence (what happened after the incident; for examples, feedback, reinforcement, activity taking place) (see sample of CPR in Appendix II). Figure 1 shows a summary of the CPR.
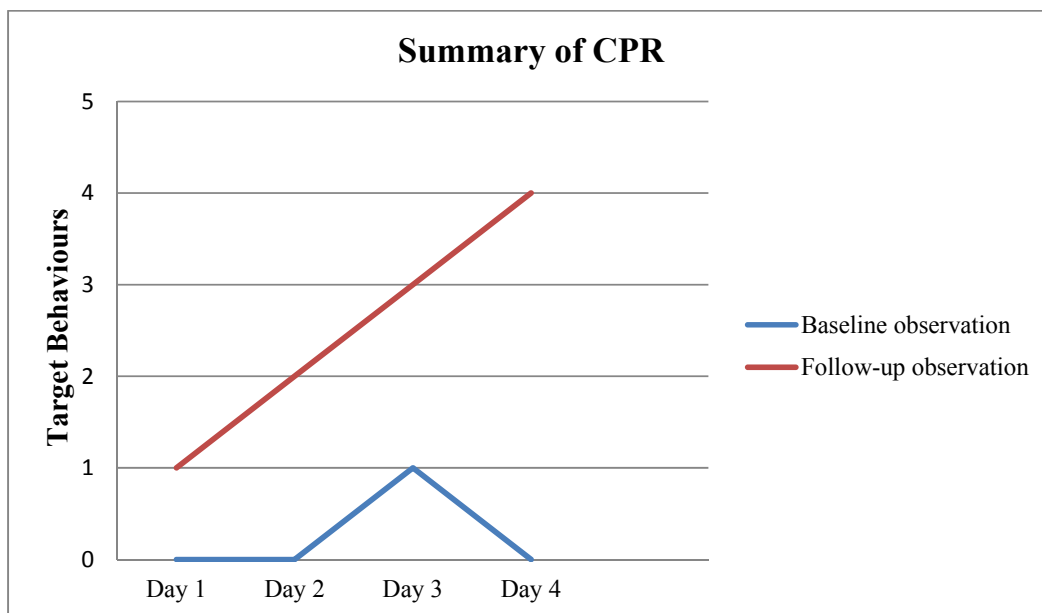
Figure 1. Summary of Frequency of Target Behaviors.

As the data from the above figure shows, Adam had one social encounter during the observation that took place prior to the intervention phase. This incident took place during recess when Adam attempted to join in on a game. He ran towards one of his classmates and nudged his shoulder. During the intervention phase, Adam's social interaction fluctuated; there were minimal attempts at first, then the social interactions increased. In the observation conducted post intervention the examiner noticed several attempts and actual social interactions; however, the amount of interaction differed from day to day.

Perhaps the amount of interaction observed post intervention differed depending on the time of day and the activity that was taking place. According to the researchers' notes in the journal and CPR, there was only one social interaction during the observation conducted on day one; this observation was conducted during the first period while the students had a writing assignment to do. On the other hand, the other

three observations took place during recess, lunch time, and carpet time (where students were free to do as they please). During these observations Adam made several interactions with his peers and teachers; such as sharing snacks, asking his classmate questions, and greeting a teacher. The child received positive feedback during all encounters except for one.

SBAI Results
The Social Behavior Assessment Inventory was filled out by two homeroom teachers and the special educator who works with Adam on a regular basis. The teachers filled the forms once in February, prior to starting the intervention, and once in April after completing the intervention.

The SBAI consists of four sections that need to be filled by the teachers; these sections include the following: Environmental Behaviors (ER), Interpersonal Behaviors (IP), Self-Related Behaviors (SR), and Task-Related Behaviors (TR). Thus, the results of the inventory were classified in terms of the above mentioned subscales. After adding up the scores, the total numbers were plotted on the SBAI Profile Grid. The total scores either fell in the *within expectations* range which means the behavior is acceptable, or the *elevated* range which means the behavior is lower-than- acceptable level (Stephens, 1992). A decrease in score indicates a change in ratings and improvement of behavior; the lower the score becomes, the closer the behavior exhibited is to the acceptable level (Stephens, 1992).

Environmental Behaviors
According to the homeroom teachers before intervention, Adam exhibited some problems in his care for the environment (ability to clean after himself, use the classroom materials in appropriate ways, and dispose of trash properly). He was unable to deal with emergencies in an age-appropriate way. Lastly, Adam did not show any disruptive behavior in the school premises. Similar scores were obtained in the post-intervention.

According to the special educator's scores before the intervention took place, Adam did not exhibit any problems in this area. Similar scores were obtained in the post-intervention. Table 2 shows a summary of the scores obtained from the Environmental Behavior (ER) subscale that were completed pre- and post intervention for both the teachers and special educator.

Table 2. Homeroom Teachers' & Special Educator's Ratings on Environmental Behaviors (ER) Pre and Post Intervention

Subscale	T-Pre		RC	T-Post	RC	S-Pre	RC	S-Post	RC
Care for the Environment (CE)	4	E	3	E	4	WE	4	WE	
Dealing with Emergencies (DE)	3	E	3	E	2	WE	2	WE	
Lunchroom Behavior (LR)	3	WE	3	WE	2	WE	3	WE	
Movement Around Environment (MO)	4	WE	3	WE	4	WE	4	WE	

Note. T-pre= teachers' scores pre intervention; RC= Rating Category;T-post= Teachers' scores post intervention; S-pre= Special educator's scores pre intervention; S-post= Special educator's scores post intervention; WE= Within Expectations; E= Elevated.

Interpersonal Behavior (IP)
The results of the inventory scales filled out by both the homeroom teachers and special educator pre-intervention yielded similar results. Adam's overall scores in the Interpersonal Behavior subscale fell within the elevated range. According to the results, Adam was not capable of coping with conflict in appropriate ways; for example he was not able to respond to verbal or physical assault by leaving the situation or calling for help. Adam had difficulties in gaining his teachers' attention by raising his hand or approaching them and asking for help. Adam was capable of stating his name when asked, greeting adults and peers by their names, and responding to greetings by shaking hands and saying, *How do you do?* However, he was not capable of maintaining eye contact, introducing himself, or introducing people to each other. Adam could help his peers and teachers when asked, but he was not able to offer help. Adam exhibited play skills, such as turn taking and following rules, that are lower than the expectable level for his age. Lastly, he was capable of distinguishing between what belongs to him and what belongs to others; however he was not capable of asking permission to use others belongings.

According to the data gathered in the post intervention, the total scores of the homeroom teachers' rating scales remained in the elevated range. However, the results showed a general improvement in some of Adam's interpersonal behaviors. The major improvements (decrease of 3 or more points) were present in the following subscales: Coping with Conflict (CC), Greeting Others (GR), and Making conversation (MC). The scores on Accepting Authority (AA) remained the same; while the remaining six subscales

showed a decrease in one to two points. It should be noted that Adam's scores in Greeting Others and Property: Own & Others were borderline; a decrease in an additional point would lead the score fell into the within expectations range.

Similarly, there was a general improvement in the total post test scores obtained from the special educator's rating scales on IP. The major improvements (decrease of 3 or more points) were present in the following subscales: Coping with Conflict (CC), Greeting Others (GR), and Making conversation (MC). The scores on Accepting Authority (AA) remained the same; while the remaining six subscales showed a decreased one or two points. It should be noted that a decrease in an additional point on the GR subscale would lead the score fell into the within expectations range. Table 3 shows a comparison of the teachers' and special educator's rating scales that were obtained in the pre and post intervention.

Table 3. Homeroom Teachers' & Special Educator's Ratings on Interpersonal Behaviors (IP) Pre and Post Intervention

Subscale	T-Pre	RC	T-Post	RC	S-Pre	RC	S-Post	RC
Accepting Authority(AA)	9	E	9	E	11	E	11	E
Coping with Conflict(CC)	16	E	9	E	11	E	8	E
Gaining Attention(GA)	13	E	12	E	14	E	11	E
Greeting Others(GR)	14	E	8	E	12	E	8	E
Helping Others (HP)	14	E	12	E	14	E	14	E
Making Conversation(MC)	19	E	16	E	16	E	13	E
Organized Play(OP)	9	E	8	E	7	E	6	E
Positive Attitude Towards Others(PA)	7	E	6	E	6	E	6	E
Playing Informally (PL)	10	E	9	E	14	E	12	E
Property: Own & Others(PR)	6	E	5	E	6	E	6	E

Note. T-pre= teachers' scores pre intervention; RC= Rating Category;T-post= Teachers' scores post intervention; S-pre= Special educator's scores pre intervention; S-post= Special educator's scores post intervention; WE= Within Expectations; E= Elevated.

Self-Related Behaviors (SR)
The scores of Adam's self-related behavior subscale on the teachers' ratings before intervention were all in the elevated range; except for his ability to take care of himself. His score on exhibiting responsible behavior fell in the *elevated* range; however a decrease in one point would lead the total score to be part of the *within expectation* range. Similarly, the special educator's ratings during pre-intervention were in the elevated ranges except for self-care and accepting consequence subscales.

The results of the teachers' rating scale post intervention showed a decrease in the total scores of the following subscales: Accepting Consequence (AC), Positive Attitude Toward Self (PA), and Responsible Behavior (RB). Adam's total score on Accepting Consequence became in the *within expectations* range after intervention.

The results of the special educator's rating scale post intervention also showed a decrease in the total scores of the following subscales: Accepting Consequence (AC), Expressing Feelings (EF), and Positive Attitude Toward Self (PA). Adam's scores on AC and EF became in the *within expectations* range post intervention. The total scores in the remaining subscales did not change. Table 4 shows a comparison of the teachers' and special educator's scores obtained before and after intervention.

Task Related Behaviors (TR)
In general, according to the teachers' and special educator's rating scales before intervention, Adam's scores on task related behaviors were in the elevated range. There was a conflict in scoring between the homeroom teachers' and special educator's scores in *Attending Behavior (AT)* subscale, which includes looking at teacher when instructed, quietly watching presentations, and listening to a class speaker. The homeroom teacher rated him as being in the acceptable range (score 3), while the special educator rated him in the elevated range (score 5). One explanation for the discrepancy in scores could be that Adam behaves differently depending on the setting he is in.

After the intervention was discontinued, Adam's scores on some of the subscales decreased. He showed improvement in the following subscales: Classroom Discussion (CD), Following Directions (FD), Group Activities (GP), Performing Before Others (PF), and Quality of Work (QW). The scores of the remaining six subscales did not change. Although there was a general improvement in the total scores of some of

the subscales, the scores still remained in the elevated range. The only subscale that became in the *within expectations* range is Performing Before Others (PF).

Table 4. Homeroom Teachers' & Special Educator's Ratings on Self-Related Behaviors Pre and Post Intervention

Subscale	T-Pre	RC	T-Post	RC	S-Pre	RC	S-Post	RC
Accepting Consequence(AC)	5	E	3	WE	5	E	3	WE
Ethical Behavior (EB)	10	E	10	E	7	E	7	E
Expressing Feelings (EF)	4	E	4	E	4	E	2	WE
Positive Attitude Towards Self (PA)	11	E	9	E	6	E	5	E
Responsible Behavior (RB)	9	E	8	E	8	E	8	E
Self-Care (SC)	3	WE	3	WE	3	WE	3	WE

Note. T-pre= teachers' scores pre intervention; RC= Rating Category;T-post= Teachers' scores post intervention; S-pre= Special educator's scores pre intervention; S-post= Special educator's scores post intervention; WE= Within Expectations; E= Elevated**.**

The total scores on the special educator's rating scale post intervention also showed a general improvement. There was a decrease in the following subscales: Asking and Answering Questions (AQ), Classroom Discussion (CD), Following Directions (FD), and Independent Work (IW). The decrease in total scores was between one and two points. The scores of the remaining six subscales did not change. A comparison of the teachers' and special educator's rating scales pre- and post intervention are presented in Table 5.

Table 5. Homeroom Teachers' & Special Educator's Ratings on Task-Related Behaviors (TR) Pre and Post Intervention

Subscale	T-Pre	RC	T-Post	RC	S-Pre	RC	S-Post	RC
Asking & Answering Questions (AQ)	8	E	8	E	10	E	8	E
Attending Behavior (AT)	3	WE	3	WE	5	E	5	E
Classroom Discussions(CD)	12	E	10	E	17	E	16	E
Completing Tasks(CT)	6	E	6	E	6	E	6	E
Following Directions(FD)	6	E	5	E	6	E	4	E
Group Activities(GP)	12	E	8	E	7	E	7	E
Independent Work (IW)	8	E	8	E	7	E	6	E
On-Task Behavior (OT)	9	E	9	E	11	E	11	E
Performing Before Others(PF)	10	E	5	WE	6	E	6	E
Quality of Work(QW)	8	E	7	E	8	E	8	E

Note. T-pre= teachers' scores pre intervention; RC= Rating Category; T-post= Teachers' scores post intervention; S-pre= Special educator's scores pre intervention; S-post= Special educator's scores post intervention; WE= Within Expectations; E= Elevated.

In an attempt to gauge which subscales changed or stayed the same from the pre- to post intervention phase, a summary of the total scores are presented in Table 6 and Table 7; Table 6 lists the target subscales and Table 7 lists the non-target subscales. The subscales were divided into target and non-target depending on the behaviors that they represent. The selected target subscales are the following: in the Interpersonal Behaviors category, the important subscales were: Coping with Conflict, Gaining Attention (examples: raising hand, using please and thank you, or asking peers for help), Greeting Others, Helping Others, Making Conversation, Positive Attitude Towards Others, and Playing Informally (example: joining in on play or sharing games); in the Self-Related Behaviors category, the following were selected: Expressing Feelings (example: describing own or others feelings or moods verbally) and Positive Attitude Toward Self (example: saying thank you and making positive statements about self); in the Task Related Behaviors category, the following were selected: Asking and Answering Questions, Classroom Discussion, Group Activities, and Performing Before Others.

According to the data presented in Tables 6 and Table 7, Adam's target behaviors improved in all of the subscales; this was documented in either the teachers' rating scales, the special educator's ratings, or by both. Yet, his scores remained in the elevated range except for the special educator's score on expressing feelings.　Adam also showed improvement in some of the non-target behaviors which is not

commensurate with the increase in the target behaviors. All scores that did improve remained in the elevated range.

Table 6. Summary of Changes in Target Behaviors

Subscales	Change in teachers' total score	Change in range (teacher's score)	Change in special educator's total score	Change in range (special educator's Score)
Coping with conflict	< 7	-	< 3	-
Gaining attention	< 1	-	< 3	-
Greeting others	< 4	-	< 4	-
Helping others	< 2	-	-	-
Making conversation	< 3	-	< 3	-
Organized play	< 1	-	< 1	-
Positive attitude towards others	< 1	-	-	-
Playing informally	< 1	-	< 2	-
Expressing feelings	-	-	< 2	WE
Positive attitude toward self	< 2	-	< 1	-
Asking & answering questions	-	-	< 2	-
Classroom discussion	< 2	-	< 1	-
Group activities	< 4	-	-	-
Performing before others	< 5	-	-	-

Note. < = decrease in score; WE = changed to within expectations; - = no change.

Table 7. Summary of Changes in Non-Target Behaviors

Subscales	Change in teachers' total score	Change in range (teacher's score)	Change in special educator's total score	Change in range (special educator's Score)
Care for the environment	< 1	-	-	-
Dealing with emergencies	-	-	-	-
Lunchroom behavior	-	-	< 1	-
Movement around environment	< 1	-	-	-
Accepting Authority	-	-	-	-
Property: own & others	< 1	-	-	-
Accepting consequences	< 2	WE	< 2	WE
Ethical behaviors	-	-	-	-
Responsible behavior	-	-	-	-
Self-care	-	-	-	-
Attending behavior	-	-	-	-
Completing task	-	-	-	-
Following directions	< 1	-	< 2	-
Independent work	-	-	< 1	-
On-task behavior	-	-	-	-
Quality of work	< 1	-	-	-

Note. < = decrease in score; WE = changed to within expectations; - = no change.

Teacher' & Parent's Feedback

Towards the end of the intervention, an informal meeting was conducted with the teachers, special educator, and counselor to inquire about Adam's behavior in and out of class. His teachers reported great improvement in peer interaction during recess and group activities, but minimal verbal communication with others. Adam's special educator indicated that Adam had grown more comfortable with his peers

and teachers by the end of the year, thereby justifying his increased interaction with others. The school counselor noted that Adam had shown progress in her sessions; he hadstopped her in the hallway to say *hi* on several occasions.

An informal phone interview was conducted with Adam's mother to ask for her feedback. She noted that Adam's behavior towards his family is inconsistent. He exhibited friendlier behavior towards his siblings at times, while he tended to ignore them or play alone at other times. At all rates, he had become more comfortable interacting with their new cleaning lady, and greeted the doorman and their neighbors in the building on several occasions.

Discussion of Results
SBAI Results
The data gathered from the homeroom teachers' and counselor's SBAI rating scale that were completed pre and post intervention showed mixed results. One possible explanation for the difference in ratings is that the Adam would act differently depending on the setting. For example, he would act in a particular if he is in his regular classroom with his peers as opposed to when having a one-on-one session with the special educator. Perhaps Adam feels more comfortable expressing himself when fewer people are around, or he might simply feel more comfortable talking to his special educator than his homeroom teachers, consistent with Delano and Snell (2006) who noted a difference in behavior from one setting to another. In their study, they attempted to use social stories to increase verbal initiations in three children with autism. The results indicated that the children showed improvement in the controlled setting; however, only two out of three were able to generalize their social behavior in the regular classroom.

Moreover, according to Bellini, Benner, Hope, &Peters's (2007) meta-analysisof 55 single-subject design studies maintenance and generalization effects of school-based social skills interventions for children and adolescents with ASD were significantlylower for interventions that took place in the resource room.   Conversely, interventions that were implemented in the regular classroom produced higher maintenanceeffects and higher generalization effects across participants and settings.

In sum, results from the rating scales presented in tables one through six confirmed the first assumption; there was improvement in scores on the post intervention ratings. However, it should be noted that although there was an improvement in the total scores of many of the subcategories on the SBAI rating scale, most scores still remained in the elevated range. One possible explanation may be that the duration between the time the first and second rating scales were completed was too short. Two months may not have been long enough for there to be a big difference in behavior.

Conditional Probability Record (CPR) Results
The data gathered using the Conditional Probability Record (CPR) which is part of the Functional Behavioral Assessment (FBA) process confirmed the second assumption made by the researchers. The CPR record showed an increase in social engagement following the initiation of the social stories and peer mediated intervention.

Although Adam exhibited an increase in social interactions with others, his conversational skills and oral expression did not improve. He was able to interact with others by sharing his snacks, raising his hand, and playing in a friendly manner with his peers. However, Adam exhibited minimal verbal contact with others; he attempted to speak a few times, albeit in unintelligible mumbling. Also, when Adam shared his snacks, he simply handed the cookie to his classmate without saying anything. When the classmate said thank you, Adam just smiled.

Berry, Bodin, Gilmore, Klinger, Lee, Palardy (2003) documented similar results to those found in this study. They used social stories to teach the following social skills: greeting, conversation, and play to four children with HFA. The children were between the ages of 6 and 9. The intervention took place once a week for 8 weeks. Following each story session, the children were paired with other typically developing peers to do fun activities. These researchers used observation of the play sessions and rating scales as their assessment tools; the children were asked to complete the Social Support Scale for Children and the Loneliness Scale. The results of the study showed that these children improved; initiating and responding to greetings and play skills but not for conversational skills (Berry et al. 2003). The children also noted an increase in perceived social support from their peers post-intervention.

Behavioral Changes Observed During Intervention
The results of this study showed that reading social stories was beneficial. Adam was capable of reading the social stories on his own, and was able to answer the comprehension questions related to the text. Adam also showed an increase in social interactions such as greeting the researchers and other teachers such as the librarian. He was also capable of asking questions and sharing items; all of the above mentioned behaviors were discussed in the stories read during the story sessions, similar to Denning (2007) and Thiemann and Goldstein (2001)'s findings. However, the latter study showed limited generalization and maintenance of social behavior, presumably due to the length of the intervention period. Adams, Gouvousis, Waldron, &VanLue (2004) conducted an intervention with a 7-year-old participant with a disorder from the ASD which consisted of reading social stories. Although the intervention conducted by Adams et al. (2004) differed from the present study in that they had the parents read social stories to their child at home, the study yielded similar results. Adams et al. (2004) noted that reading social stories to the child helped him understand how to ask for help, thus increased his social interactions with the adults around him.

According to the data noted in the journal, Adam was capable of working cooperatively with his peers. He was able to perform the delegated tasks. During two of the sessions, Adam was required to stand and present what he has done in front of his classmates. He was capable of labeling the items he drew and acting out a given role. However, it should be noted that he was not capable of expressing himself in a fluent way. The teachers usually gave him probes or asked him specific questions in order for him to express himself orally. When comparing Adam to the peers in his group, it was noticeable that he still has not reached their level of oral expression. The researchers also noted that, apparently, the other students in class knew that Adam is somewhat *different*. They attempted to assist him by asking if he needed help or by guiding him in what he should do on occasions. For example, the teacher called Adam while he was working on a given task, so one of his group members came up to him and told him that the teacher was calling him; his peer then told him he should see what she wants.

A group of researchers attempted to examine the effectiveness of cooperative learning (CL) in increasing the level of social behaviors and task engagement in two high-functioning autistic students (Bruton, Daly, Grey, Hanan, &McGuinness, 2007). Both children were placed in groups which included three typically developing peers, one maleand two females. The first child attended the CL session in the resource room, while the second in the regular classroom. According to the results of their study, the group work substantially increased the level of social engagement for both children. CL seemed to facilitate task engagement; additionally there was a decrease in passive task engagement.

Kamps et al. (1994) found peer mediated interventions to be effective in increasing social competence in children with disorders from the ASD. Their study included two HFA participants and all otherchildren in a third-grade classroom. The two children with autism were 8- and 9-year-old boys; they were high functioning in terms oflanguage and intellectual abilities but lacked social competence.The group sessions resulted inan increase in interaction from 80 to 120 seconds per 5-minute sample for the children with autism. Additionally there was an increase in themean interaction time of peers,and the children with autism displayed improved academic achievement (DiSalvo& Oswald, 2002).

Additionally, Laushey and Heflin (2000) investigated the effects of a similar approach with two five-year-old children diagnosed with ASD. These children had adequate language skills and couldread at the kindergarten level, but suffered from weak social competence. The results indicated that the childrenwith autism increased their social interaction by 36% and 38% respectively during the treatmentphase, as compared with thebaseline phase, in which children attended regular classes but were not assigned a buddy (Disalvo& Oswald, 2002). Moreover, many researchers have documented the effectiveness of peer mediated intervention programs that improve social skills, such as LEGO (LeGoff, 2004; LeGoff and Sherman, 2006) and Social Use of Language Programme (SULP) (Owens et al., 2008).

The results of the present study allow several conclusions. First, Adam showed an increase in social interaction, from pre to post intervention phase, which was documented using CPR. Although Adam exhibited an increase in social interactions, most of Adam's attempts to interact with others were not through verbal communication or through using complete sentences. Secondly, positive change was documented in the scores of the teachers and special educator on the rating scales; these changes were related to the skills targeted through the social stories. However, it should be noted that, although change was evident, most of his scores remained in the elevated range. It seems as though Adam enjoyed the social story session since he asked to go to the library on several different occasions. Additionally, Adam

showed an increase in friendly behavior towards others during the intervention period. Peer mediated intervention, through cooperative group work also seemed to be an enjoyable activity for Adam and his peers. Adam was capable of working cooperatively; he also received positive feedback on various occasions which reinforces Adam's behavior. Peer mediated intervention also appeared to be beneficial in this particular case because it gave Adam the opportunity to practice what he was taught natural settings (versus un-natural settings such as the library). Lastly, the effectiveness of this intervention was confirmed by the feedback obtained from Adam's teachers and mother.

Limitations
Although the study was found to be effective and Adam's social interactions with others increased, there are several drawbacks to the study. First, the study was implemented on one student, thus limited generalization can be made. Secondly, because it was a combined intervention, we cannot say which intervention caused the changes in Adam's behavior. Thirdly, the observation was conducted by the researchers, which might have created internal bias. Moreover, we cannot say with certainty that Adam will maintain his pro-social behavior since additional post-testing after longer periods was not conducted. Lastly, one limitation may be the age of the participant. This combined intervention was found to be enjoyable and effective with a first grader, however it might not be as effective for older students and adolescents.

Implications
Although various studies have found social stories to be effective in decreasing inappropriate behavior (Scattone, 2002; Sansosti& Powell-Smith, 2006; Scattone, Wilczynski, Edwards, and Rabian, 2002), the present study adds evidence to the effectiveness of social stories in increasing pro-social behaviors in children with ASD. Additionally, the mother's positive feedback implies that there may be a generalization of pro-social behavior to other settings.

This combined intervention is easy to implement in inclusive settings. It is not only beneficial, but also simple and enjoyable to the student. Additionally, the cooperative group work not only encourages the integration of children with special needs with their regular peers, it also reinforces desirable behavior and provides the student with several opportunities to apply what was taught in the social stories.

According to the findings of this study, several components can aid teachers and special educators in remediating social skills in children with ASD. Some of these components are the following: (a) use social stories that describe specific situations and expected responses (refer to Gray, (1994)); (b) provide the reader with insight on how others would feel when they he/she acts in an appropriate way; (c) model the appropriate behavior expected of the child; (d) provide the child with ample opportunities to practice what was taught in the story. This can be done by involving peers through cooperative group work or involving the parents; (e) use positive reinforcement to encourage the reoccurrence of desired behaviors.

Recommendations for Future Research
Since social skills deficits create lifelong difficulties for children with ASD, it is essential for researchers to find ways to remediate these skills. Future studies should try to identify which elements in the combined intervention lead to the greatest change in behavior; they should also identify the appropriate time needed for the intervention to be effective. Perhaps future studies can extend the length of treatment or intensify the intervention by giving the child additional afterschool sessions. As mentioned earlier, although, the interventions need to be tailored to the child's specific needs, researchers should try to identify which individuals will benefit the most from such an intervention. Additionally, more research should be conducted in order to address the issue of maintenance and generalization of social skills. Perhaps future studies can conduct post tests after longer periods of time from discontinuing the intervention in order to see the long term effect of the combined intervention.

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