



A Novel Peer-Based Social Skills Instructional Program for Middle School Learners with Higher Functioning Autism

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Rec date: August 16, 2014, Acc date: September 17, 2014, Pub date: September 23, 2014

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Abstract

It is well established that teaching social skills to children and youth with autism spectrum disorders (ASD) is important. At the same time it is acknowledged that teaching socially valid and functional social behaviors to these students is challenging, especially when the learners are middle-school-age youth with higher-functioning autism and Asperger disorder. These students are well known for their unenthusiastic acceptance of social instruction and use of their newly acquired skill assets in general education and other real world settings. In this connection we describe an innovative and motivating approach for teaching social skills to middle school students with ASD using peer partners.

Keywords: High functioning autism; Asperger syndrome; Social skills; Social skills instruction; School-Based social skills training; Adolescent

Case Study

Children and youth with Autism Spectrum Disorders (ASD) almost universally experience significant social skill and social interaction problems [1]. In fact social deficits are defining diagnostic characteristics of ASD [2]. Students with an ASD have difficulty interacting with others and forming and maintaining age-appropriate peer and adult relationships; demonstrating self-management and personal responsibility skills; and displaying school and academically-related social skills such as following rules and conventional classroom routines and demonstrating accepted social behavior within cooperative groups [3,4]. These clearly recognized and well accepted challenges demand that children and adolescents with ASD receive instruction and support in learning and practicing age-appropriate social skills. Fortunately learners with ASD are able to learn and use appropriate social behaviors. However this only occurs when students are provided high quality and realistic learning experiences and when teachers and other adults create suitable opportunities for these learners to engage in realistic and supportive social interactions [5].

Adolescents with high-functioning autism disorders such as Asperger Syndrome also have social skill deficits and experience social and social interaction difficulties, albeit the form of their weakness is different from those of individuals with more severe and classic forms of autism [6,7]. Youth who fall at the so called "high end" of the autism spectrum frequently have difficulty understanding social protocol and displaying unskilled and awkward social initiations and responses. All too commonly these youth are described by adults and peers as socially stiff and clumsy, emotionally tactless, self-centered, incapable of understanding subtle social cues, inflexible, and lacking in empathy [3]. These difficulties are often exacerbated by typical "normal developmental" challenges and changes associated with puberty and complex and ever-changing adolescent social norms. Without

question the social challenges connected to ASD require instruction and support from educators. Children and youth who acquire and practice appropriate social skills are able to achieve superior outcomes when compared to students who lack such assets [8]. The benefits and social validity of improved social skill capacity among people with ASD is well established [9,10]. Additionally the negative effects and outcomes associated with failure to learn and use appropriate social skills are also recognized [4]. To be sure, social skills and competent social interaction capacity positively impact academic and school-related outcomes, employment success, independent living potential, quality of life, and countless other aspects throughout the life cycle [11-13].

In spite of the unquestionable need to teach social skills to students with ASD there are obstacles and challenges associated with planning and implementing effective social skill training programs. One such challenge is time. Plainly an effective social skill program is one that efficiently fits within a school schedule. Secondly a successful social skill and social interaction support program needs to be based on interventions and supports that are tested and backed by scientific evidence [14,15]. Many of the social interaction interventions that have proven most successful are based on components of explicit teaching (i.e., expressly and directly teaching salient social skills) and applied behavioral analysis [4]. Programs designed to teach social understanding (i.e., understanding perspectives of others, recognizing social cues, using social problem-solving strategies) have also shown promise [16]. Finally, and perhaps most importantly, effective social skill training programs, especially ones designed for adolescents with higher-functioning autism and Asperger disorder, rely on methods and curricula that appeal to and align with the unique interests of youth. Without a doubt even the most scientifically supported social skill methodology and curriculum will prove to be ineffective unless adolescents find it attention-grabbing, motivating and a realistic and believable source of social knowledge and skills that they can use in real world settings. In this context we describe in this article a structured and time efficient effective-practice-oriented social skill

instruction program that was geared to appeal to middle school age youth.

Description of Social Skill Curriculum and Instructional Methods

The program described below took place in a public middle school in a large Midwestern city. The middle school is part of an urban school district with high percentages of minority students and low socio-economic families.

Selection of Target Skills

The program targeted 8 key peer interaction behaviors that were identified by Stichter and Conroy [13] as critical social competence responses. The same publication, *How to teach Social Skills and Plan for Peer Social Interaction*, also provided basic guidance for designing and carrying out the program. The 8 behavioral target categories included: greetings, commenting, responding to peers, complimenting, asking questions, answering questions, eye contact, body language, and maintaining conversations. The 8 targets were used as general themes/areas of social instruction for students who participated in the program. Within these general social component areas individual student target goals were selected that addressed specific social difficulties that the students were experiencing at school. For example 'greeting peers appropriately' was a general theme for all of the students involved in the program, however specific skills were uniquely selected to fit conventional and commonly used student greetings at the school as observed by staff. For instance, students were instructed to use school-customary verbal greetings such as, "Hey bro, how are you?"; "What's Up?"; "Hey"; and non-verbal greetings such as head nods, hand waves, and so forth.

Selection of Students and Peer Confederates

Eight (8) middle school students participated in the program. Four of the students were identified as having special needs, specifically an autism-related disability, and all were eligible for special education. The other 4 students, identified as "peer partners", were enrolled in general education classes and were not eligible nor judged to need special education services.

Target students: The target students were all males between the ages of 12-13. Each was receiving special education services for a diagnosis of an Autism Spectrum Disorder (ASD) and recent school records indicated an IQ in the high average range. Target students did not have any other formal diagnoses at the time of this social skills program. These students were all receiving special education services in general education classrooms, and thus were fully included. The target students were selected for participation in this program by nomination from case managers and school administrators. Specifically, case managers and administrative personnel identified and rank ordered students with whom they had contact who had a diagnosis of ASD and were manifesting social deficits and experiencing school-related social problems. From this nomination list the lead author invited 4 students to participate in the program

Peer confederates: The peer partners who participated in this program were two boys and two girls between the ages of 12-14. None of the peer partners were eligible for or in need of special education services. In an attempt to attract high preference peer partners, several presentations were made to student groups (e.g., Student Government Association, sports teams, cheerleaders, and yearbook staff). During

these presentations the goals of the program were explained to the students and volunteers were asked to contact the instructor if they wanted to participate. From the students who expressed an interest in participating in the program 4 peer partner volunteers were selected by the lead author. The peers included a member of the Student Government Association, football and basketball players, and a cheerleader. Two 30-minute sessions were held with the peer partners prior to program initiation to explain their roles and responsibilities in the program. During this time the peer volunteers were instructed to first and foremost be friends and peers with the other students (i.e., they were explicitly told that their role was not to be a teacher nor were they to assume that they had status that was superior to any of the other students). At the same time they were instructed to be assertive in the social groups by: "calling out" other students for inappropriate social behavior, providing clear examples of appropriate behavior, and generally providing group leadership. They were also given information on the behavioral and social characteristics of individuals with high functioning autism, and encouraged to engage with the target students in and out of the social program.

Instructional groups: The peer partners and target students were placed into one of three small instructional work groups. The group assignments were formed based on the characteristics of the students with an ASD and the manner these features would best fit with the traits of the peer partners. For example one target student consistently demonstrated difficulty interacting appropriately with females. For instructional purposes this boy was placed in a group with two girl volunteers. Another target student had a tendency to be timid and retiring in the presence of other students and had a history of participating very little in small groups. As a result of these traits this particular student was paired with only one peer partner, thus ensuring that he would have ample opportunities to participate and responsibilities within his group. Additionally, target students who demonstrated more severe social problems were placed with more assertive and self-confident peers who demonstrated strong leadership behaviors. In contrast, target students with fewer severe social deficits and excesses and behavior concerns were assigned to groups with less forceful and assertive peer partners. For 10 consecutive weeks the groups met for 30-minute sessions on alternating days in a multi-purpose room at their middle school.

Instructional routines: The social skills instructional process followed a structured routine for the first 8 weeks of the program: 1) priming, 2) peer collaboration, 3) scenario/social skit performance, 4) feedback, and 5) conclusion. The final two weeks of the program featured unique review components to support understanding and generalization of previously taught skills.

Priming: Each instructional session began with a 3-5 minute priming lesson presented by one of the instructors. The priming lesson was designed to serve as a brief introduction to the skill that was being taught; it included a brief mini-lesson on the skill and an introduction to a skill rubric that was connected to the target skill. The mini-lessons were verbally presented to both the target and peer partner students, who sat together in their assigned groups. Each lesson included an example of the skill and various associated components, such as circumstances and situations when the skill would apply, variations of the skill, and nuances related to skill performance. For example, the mini-lesson on greetings included what a greeting was; why it is polite to greet others; how greeting others might make them feel; and examples of socially relevant and suitable greetings. Immediately following the mini lesson students in the groups were given a written

copy of a skill rubric that was linked to the social behavior that was being taught. The rubric provided the participants with a continuum of skill performance, ranging from “Bad, OK, Good”. The rubrics were presented in language understandable to students and under each rating option (e.g., “Good”) operational behavioral examples and criteria were listed that described performance of the skill in a fashion

that matched each scoring category. For example under the “Bad Greeting” category the rubric detailed bullets that characterized poorly executed or inappropriate greetings (e.g., “too close when greeting”, “greeting too personal” “voice too loud”, “negative body language”). Figure 1 shows examples of student rubrics.

| Complimenting | | |
|--|---|---|
| Bad Complimenting | OK Complimenting | Good Complimenting |
| <ul style="list-style-type: none"> Ø Rude or mocking compliments Ø Rude voice tone or volume Ø Rude body language | <ul style="list-style-type: none"> Ø Something that you might think is a compliment, but sounds rude Ø Compliment that has nothing to do with the current situation Ø Poor body language (not looking at the person) | <ul style="list-style-type: none"> Ø Nice relevant compliment Ø Genuine compliment Ø Looking at the person Ø Nice body language Ø Nice voice (tone and volume) |
| 0 | 1 | 2 |

Figure 1: Example of student rubrics.

Peer collaboration: Immediately following each priming session the students began working in groups to develop a social scenario that illustrated the skill that had been introduced in the priming session. Each group independently worked for approximately 5-7minutes to develop a skit or brief role playing routine that demonstrated the skill under consideration. This group work was done without the assistance of teachers, however if group’s requested assistance prompts and other assistance was provided by teachers and staff who were in the room. During the peer partner training period that took place prior to initiating the program the student partners were instructed to take leadership roles during these scenario-building activities. This training included structuring and organizing the group, managing time, assigning responsibilities, staying on-task, assisting students with ASD in using idiosyncratic and narrowly defined interests to accomplish group goals, and directing students away from perseverative interests and into more task-oriented activities and behaviors. For example, on one occasion a target student was very interested in developing a role playing skit around an encounter in outer space. The peer partner was able to direct the scenario the group developed to include a conversation about space travel between two boys at recess. The peer partners were also taught to use the evaluation rubrics in developing their skits and role playing routines to ensure that the target skill elements and the group demonstration components matched the rubrics. The peer partners were also instructed that they were not to assume behavior management roles (i.e., if needed, teachers were available to address any significant behavior problems). A few minutes prior to ending the group work the teacher prompted each group to do

a brief “rehearsal” of their skits and to attend to any last minute matters.

Social skit performance: This part of the social skill instructional program involved each of the small groups performing the “social skit” they developed. The teacher randomly determined the order of presentation. Before performing the skit students from each group introduced their performance by setting the stage for the setting where the event was taking place (e.g., waiting for the school bus in the morning, lunchroom) and the specific skill that they were demonstrating. The social skits lasted between 1-3 minutes and were performed in front of the other students and staff in the multi-purpose room. The students had access to some basic props (e.g., hats, backpacks, sunglasses) during these skits.

Feedback: One of the more unique features of this program was the feedback routine. Feedback was provided to the students by a panel of three adult judges. The judges routinely changed and included teachers in the building, administrators, school support staff and related service professionals, graduate students from a nearby university who were enrolled in an ASD program, and university professors. The judging panel was modeled after popular reality shows such as “American Idol” and “Dancing with the Stars”. As soon as each group completed their performance each judge took a few minutes to provide specific feedback. The evaluation panel used the same rubric to evaluate the presentations that the students used to develop their demonstration skits. The judges also used a “panel rubric” (Figure 2) that evaluated students on teamwork behavior, skill performance and

creativity. Feedback from the judges included statements on what was done well during the performance as well as corrective statements.

| Rubric Score | Social Appropriateness During Skit | Collaboration with | Creativity | Totals |
|---|--|--|--|--------------------------------------|
| How did the group do according to the student rubric? | Rate the overall Appropriateness of the students during the skit. Specifically identify inappropriate behavior | Did students work well together when developing their Skits? | Realistic scenarios and skit construction. Students developed unique and creative skits. | Group II: ----- Date: ----- |
| 0 1 2 | 0 1 2 3 | 0 1 2 3 | 0 1 2 3 | Group Score: |

Figure 2: Evaluation panel rubric.

Corrective statements explicitly focused on the social behaviors that were taught in each session. An example of a corrective statement given during a skit that focused on greeting and body language was: "Great use of gaining attention, I like that you tapped them on the shoulder". In this example the statement highlighted a positive element of a group's skit. Additionally, the adult offering the feedback offered that, "I noticed that you were standing too close to your partner while talking. Standing too close might make people feel nervous and uncomfortable, and they will not want to talk to you. As a rule stand an arm's length away from someone when you talk to them; be respectful of other people's body space". Thus, the feedback was designed to identify an area of improvement, while giving suggestions on how to improve. Judges were encouraged to be honest with the students and to identify specific instances in the performance when socially inappropriate behavior had occurred. For instance, on some occasions students would engage in inappropriate social behaviors, not specific to their skit (e.g., using offensive language and/or making inappropriate comments; disengagement, lack of participation, and/or attention) in an effort to gain attention from peers and staff in the class. During feedback judges would address these behaviors, highlighting the inappropriateness of the behaviors exhibited and how it affected their score in a negative way.

Each judge independently gave each group a final score based on their performance. Based on aggregate evaluation scores the "winning" team received a small prize. Following each session the teacher entered each group's scores on a large bar graph that was in front of the classroom and the team with the most points at the end of the training program was declared the grand prizewinner. Session prizes included small items identified through a reinforcement inventory, and included folders, pencils, wristbands, sports cards and comic books. Grand prizes included modest value gift cards for each team member donated by a local variety store.

Review and generalization: After each of the previously identified 8 target social skills had been addressed students were provided review sessions and skill generalization instruction. This two-week sequence is described below.

Rating novel social behavior: For three sessions the students watched clips from popular teen television shows and rated the social

behavior of the actors. Examples of shows from which the teacher harvested clips that illustrated skills and behaviors that had been instructional targets during the first 8 weeks of the program included *iCarly*, *Victorious*, and *Pretty Little Liars*. For example, using a scene from the show *iCarly* (episode 1 Season 4, *iGot a Hot Room*) the learners were shown a scenario that illustrated the teen actors engaging in a social exchange. In this particular clip students were asked to identify and rate both appropriate and inappropriate social behaviors. This clip (5:03-5:17 into the episode) demonstrates appropriate examples of eye contact and body language while also showing inappropriate commenting when one teen actor commented that the other actor's hair (a boy) made him look like a girl. The students used the same skill rubrics they had earlier used in their groups to structure and organize their social skits and brief role playing routines to evaluate the television behaviors they were viewing. The clips were carefully chosen by the instructors to include positive and negative representations of the target skills. After viewing each short clip the students were given an opportunity to rate the skills individually, within their small groups, and finally as a whole class exercise. Often clips were replayed for students to attend to specific cues that they may have missed during the initial presentation.

Student videos: The last five sessions of the program involved the students working within their small groups to develop and film short videos that demonstrated integrated illustrations of the social skills and behaviors they had been studying over the previous 9 weeks of the program. The students developed scripts in their small groups and worked together to create a single social scenario that demonstrated all of the skills targeted by the program. Once the videos were completed the students watched all three videos and used the skill rubrics to rate the behavior portrayed by their peers

Program Evaluation

The program we describe was not designed as a research study. Rather, our purpose was to plan and implement an innovative and cost and time efficient pilot program that would feature effective and promising methods for teaching socially valid social skills to middle-school- age adolescents with higher functioning autism. We also sought to carry out a social skill instructional program that would

include both students with special needs and non-disabled peers and that would be entertaining and motivating for students. Informally we are of the opinion that we were successful in accomplishing all of these goals. We were able to base our program on proven and promising methods [10]; and our school administrators and colleagues were highly appreciative of a novel social skills instructional program that efficiently fit within a tight school schedule and that did not require significant additional human and non-human resources. We were also able to create significant enthusiasm about the program within the ranks of the school's general student body, and numerous requests to participate in future programs came from a significant number of general education students after the program was completed. Finally we were of the opinion that the program successfully demonstrated that social skills could be taught to middle school students with ASD in a manner that was entertaining, highly engaging and that led to acquisition and performance of functional and utilitarian skills in settings beyond the training site.

We also saw anecdotal evidence of skill generalization and maintenance resulting from the program, including student interactions with peers in natural settings (i.e., lunch rooms, recreation activities, hallways, etc.) and reports from parents of increased confidence in community settings. Indeed, we also informally received word from several of our student's general education teachers that the youth involved in the program were successfully using their social skills in their general education classes. Importantly no negative issues were reported between target youth participating in the program and peer confederates. Quite the opposite actually, students with and without autism who participated in the program were observed socializing outside of the program. This is important, as we were concerned that components of the program (acting out skits, developing creative content, being judged by "experts") might make students with autism vulnerable to teasing or ridicule from peers. That this did not occur and that students with and without autism interacted (i.e., sat together at lunch, talked in the hallways) outside of the program, indicates that choosing trustworthy peer confederates is an important step to implementing a program such as this. While this program lacks sufficient evidence on its impact on social competence for youth with high functioning autism, it does demonstrate the feasibility and buy-in that can be achieved through a novel approach to social skill instruction.

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