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# The effects of including peers in social skills training for students with autism

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# The effects of including peers in social skills training for students with autism

## Abstract

This literature review examined the effects of including autistic children with typically developing peers in social skills training programs. The benefits and limitations of the study were discussed concerning how peer models affected the performance of children with Autism Spectrum Disorder. Guidelines were presented to implement a social skills program. Also, conclusions and recommendations were drawn from the literature to improve social skills in autistic children by including them with typically developing children in a learning setting.

The Effects of Including Peers in Social Skills Training for Students with Autism

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## Abstract

This literature review examined the effects of including autistic children with typically developing peers in social skills training programs. The benefits and limitations of the study were discussed concerning how peer models affected the performance of children with *Autism Spectrum Disorder.* Guidelines were presented to implement a social skills program. Also, conclusions and recommendations were drawn from the literature to improve social skills in autistic children by including them with typically developing children in a learning setting.

# TABLE OF CONTENTS

CHAPTER 1

INTRODUCTION

Background

Autism is the most common of the Pervasive Developmental Disorders, affecting an

estimated 1 in 250 births (Centers for Disease Control and Prevention, 2003). This means

that as many as 1.5 million Americans today are believed to have some form of autism.

That number is on the rise. Based on statistics from the U.S. Department of Education

and other governmental agencies, autism is growing at a rate of up to 17 percent per year.

At this rate, the Autism Society of America estimates that the prevalence of autism could

reach 4 million Americans in the next decade (Autism Society of America, 2005).

One of the most characteristic symptoms of autism is a dysfunction in social

behavior. The social problems can be classified into three categories: socially avoidant,

socially indifferent, and socially awkward (Edelson, 1997). Children with autism lack

appropriate social skills, and have a limited ability to take part in reciprocal conversation.

In addition, they do not seem to understand many of the unwritten rules of

communication and social conduct that their peers seem to naturally learn through

observation. These characteristics significantly impact their ability to demonstrate social

and emotional competence (Barnhill, 2002).

What Is Autism?

The definition of autism is based on the diagnostic criteria provided by the

American Psychiatric Association's Diagnostic and Statistical Manual of Mental

Disorders - Fourth Edition (DMS-IV). Autism is a category of disorders in which many

basic areas of infant and child psychological development are affected at the same time, and to a severe degree. The disorder of autism has three major components: 1) qualitative impairment in social interaction, 2) qualitative impairment in communication, and 3) restricted, repetitive, and stereotypical patterns of behavior, interests and activities (Association for Science in Autism Treatment, 2005).

Autism typically appears during the first three years of life. Children and adults with autism have difficulties in verbal and non-verbal communication, social interactions, and leisure or play routines.

Autism is a spectrum disorder. The symptoms and characteristics can present themselves in a wide variety of combinations, from mild to severe. Children and adults can exhibit any combination of the behaviors in any degree of severity (Autism Society of America, 2005).

People with autism process and respond to information in unique ways. Some children and adults may exhibit aggression and/or self-injurious behavior. In addition, persons with autism may show some of the following traits: insistence on sameness, resistance to change in routine or schedule, have difficulty in expressing needs or repeating words or phrases in place of responsive language. Also, they may respond by laughing, by crying, and by showing distress for reasons not apparent to others. Autistic people prefer to be alone and tend to appear aloof. They may exhibit tantrums, the inability to mix with people, and may not want to cuddle or be cuddled. Students with autism may have little or no eye contact and are typically unresponsive to normal teaching methods. They may engage in sustained odd play and spin objects, or have

inappropriate attachments to them. Oftentimes, they display uneven gross and fine motor skills. Other characteristics include over-sensitivity or under-sensitivity to pain, no real fears of danger, noticeable physical over-activity or extreme under-activity, and unresponsiveness to verbal cues, as if they were deaf or hard of hearing, when in fact hearing test results are in the normal range.

## Purpose of the Study

The purpose of this study was to examine recent literature concerning the effectiveness of social skills training programs for students with autism. In order to achieve this purpose, this paper will address the following questions:

1. How can we promote social skills in autistic children?

2. What are the effects of Peer Tutoring for student with autism?

3. What are the guidelines for creating a social skills training program for students with autism.

## Need for the Study

Over the last 20 years, a variety of treatment approaches have been used in an attempt to improve the social skills deficits of students with autism. Some of the varieties include the use of sensory techniques, biomedical use, and social skills training (Edelson, 1997).

Houston-Wilson (1998) observed that without appropriate social skills, children with autism have significantly greater difficulty being socially integrated into their school and neighborhood communities. It is important to analyze how social skills programs benefit students with autism, and how they can be used to the best advantage to meet the social needs of these children.

Limitations

There is limited recent research available on the effectiveness of social skills training with autistic children. The majority of the focus looks at the addition of peers to increase the social skills of children with autism. Many studies are currently doing follow up research to further investigate ways to help these children. Also, there was difficulty locating specific journals and research articles that could have provided more insight and information on the topic.

Definitions

The following definitions of terms are used in this paper to eliminate ambiguity and misunderstanding.

Antecedent prompting: Antecedent prompting involves the teacher prompting the child to engage in some type of interactive behavior, which is responded to positively by classmates and teachers (Simpson, Smith-Myles, Sasso, & Kamps, 1997).

Autistic Disorder: Autistic Disorder, sometimes referred to as *early infantile autism* or *childhood autism*, is four times more common in boys than in girls. Children with Autistic Disorder have a moderate to severe range of communication, socialization, and behavior problems. Many children with autism also have mental retardation (Autism Society of America, 2005).

Direct instruction: Direct Instruction is a fast paced, highly structured instructional approach, designed to advance the learning of at-risk students. It is highly scripted and provides constant interaction between students and the teacher (Simpson, Smith-Myles, Sasso, & Kamps, 1997).

Generalization: The ability to take a learned skill into one's natural environment (Wikipedia, 2006).

Pervasive Development Disorder: Pervasive Developmental Disorders are characterized by severe and pervasive impairment in several areas of development:

- social interaction skills;

- communication skills; or

- the presence of stereotyped behavior, interests, and activities (Coriell Institute for Medical Research, 2006).

Socially awkward: These individuals may try very hard to have friends, but they cannot keep them because of the way they act (Center for the Study of Autism, 2005).

Socially avoidant: These individuals avoid virtually all forms of social interaction. The most common response is tantrumming and/or 'running away' when someone tries to interact with him/her. As infants, some are described as 'arching their back' from a caregiver to avoid contact (Center for the Study of Autism, 2005).

Socially indifferent: Individuals who are described as 'socially indifferent' do not seek social interaction with others (unless they want something), nor do they actively avoid social situations. They do not seem to mind being with people; but at the same time, they do not mind being by themselves. It is thought that this type of social behavior is common in the majority of autistic individuals (Center for the Study of Autism, 2005).

Social Skills: Social skills are skills a social animal uses to interact and communicate with others to assist status in the social structure and other motivations. Social rules and social relations are created, communicated, and changed in verbal and nonverbal ways

creating social complexity useful in identifying outsiders and intelligent breeding

partners. The process of learning these skills is called socialization (Wikipedia, 2006).

Typical development: Children who are at age level and exhibit abilities within normal

ranges (Wikipedia, 2006).

Peer initiation: Peer initiations are interactions that are initiated by peers, or typically

developing students (Simpson, Smith-Myles, Sasso, & Kamps, 1997).

Peer tutoring: Peer tutoring includes socially competent peers learning effective teaching

techniques and positive reinforcement to teach subjects and play skills to autistic children

(Simpson, Smith-Myles, Sasso, & Kamps, 1997).

CHAPTER 2

REVIEW OF THE LITERATURE

Areas of Promoting Social Skills in Autistic Children

Four approaches are commonly used to increase socialization in children with

Autism. They are direct instruction, antecedent prompting, peer initiation, and peer

tutoring. Direct instruction refers to rigorously developed, highly scripted methods for

teaching that is fast-paced and provides constant interaction between students and the

teacher. Antecedent prompting involves the teacher prompting the child to engage in

some type of interactive behavior, which, if it occurs, is responded to positively by

classmates and the teacher. Peer tutoring includes socially competent peers learning, and

using effective teaching techniques, and positive reinforcement to teach subjects, and

play skills to their classmates with autism. They are also taught to initiate and encourage

social interaction with children with autism in naturalistic settings (Simpson, Smith

Myles, Sasso, & Kamps, 1997).

There is little research involving direct instruction of social skills and antecedent

prompting; the most extensive research has been done in the area of peer tutoring, or

involving typically developing students as models to teach social skills to children with

autism. It was the focus of this review.

The Effects of Peer Tutoring

In June of 2001, the National Research Council's Report on educating children with

autism stated that an important component of educational programming for autistic

children is to provide as much intervention as possible, and these should be in settings

with typically developing peers. By doing so, the probability is increased for children with disabilities to learn from their typically developing peers (Lord & McGee, 2001).

Jones & Schwartz (2004) observed that involving peers in social skills interventions provide children with autism the opportunity to observe, imitate, and learn from social behaviors of their typically developing peers. Peer models have been involved in teaching behaviors such as language, social play, social interaction, vocational skills, and motor responses. To increase the social awareness of children in inclusive settings, educators must design peer interventions to take into account the range of special characteristics found in children with autism.

Children with autism often have difficulty learning social skills. Play is an integral component to normative peer interaction and promotes language, motor, and cognitive skills. In the study by McCann Sawyer, Luiselli, Ricciardi, & Gower (2005), the purpose was to extend research on social skills training with children who have autism by evaluating procedures to increase peer sharing. The participant was a four year old boy diagnosed with autism. The procedure was implemented during a 30 minute play session in an integrated preschool classroom. Two sharing behaviors were measured: physical sharing and verbal sharing. Physical sharing was defined when the participant handed play materials to another child. Verbal sharing included all verbal attempts at initiating physical sharing or verbal acceptance of the participant requesting materials from another child, or asking a child to share play materials. The results of the study suggested that priming before a classroom play session, combined with in-session prompting and reinforcement, improved sharing behaviors. This strengthens the research relating to

social skills training for children who have Autism by demonstrating increased sharing among typically developing students in an integrated classroom setting. The study documented that sharing behaviors can be taught successfully to children who have autism and who interact with typical peers.

Another study conducted by Kamps et al. (2002) studied the effects of peer training to facilitate social interaction for elementary students with autism and their peers. This study examined the contributions peers made to the generalization of social behaviors for children with autism through peer social skills programs. Two other investigations were completed, and each examined the role of peers when trained in explicit interaction strategies with children with autism during and after specific treatment. Generalization of these skills for target and peer participants was a particular focus of this study. Study one involved five students with autism and 51 general education peers. Three peer groups were developed for the analysis of generalization: 1) those who participated in cooperative learning groups with children with autism, 2) those in social skills groups with children with autism and 3) a group of peers familiar with the students with autism but who did not receive training. Results indicated that during cooperative learning groups with peers, time engaged in interaction increased from 30 to 191 seconds, a rate similar to what was found for typically developing peers. However, during social skills training groups, students with autism increased their peer interaction time from a range of 7-56 to 152-262 seconds. The second study included 34 students with autism and 130 peers who participated during the initial year and 120 more were added during the final probe year. Students received a variety of peer mediation programs: 1) social skills

groups, 2) lunch buddy groups, 3) recess buddy groups and 4) tutoring programs. Peers and target students received direct instruction in the use of skills within the context of each activity. Results indicated that students with autism improved in social interaction skills with non-disabled peers. Average interaction duration time between students with autism and trained peers (393 sec) was longer than with familiar peers (301 sec), which was longer than the time spent interacting with stranger peers (246 sec). Results indicate that social skills programs alone are not as effective as programs that include academic and social intervention, as well as including trained peers in cooperative learning programs. Thus, it is essential to gain increased social interactions for students with autism so that they can be placed in general education settings.

Laushey & Heflin (2000) developed a study to examine whether training interactions in dyads, involving children with autism and typically developing peers, would increase non-adult-directed interactions among the autistic participants. Two, 5-year-old male students with autism served as target students, and the *peer buddies* ranged in age from five to six years. The treatment phase, which involved the use of a *buddy system*, was comprised of a peer tutor training program implemented during free play time for all of the students. This peer tutor training program consisted of training all children in how to stay with, play with, and talk to their *buddy*. Each of the children was paired with a *buddy* each day, a child with whom they were to spend time throughout the day. Treatment outcome evaluation was based on the following four variables: 1) appropriately asking for an object, 2) appropriately getting someone's attention, 3) waiting for one's turn and 4) looking at the person to whom one is speaking.

Results indicated that social skills performance improved from an average baseline level of 29% to a treatment average of 75% for one target student and from 28% to 66% for the other target student. The *peer buddy* approach resulted in higher percentages of positive social interactions than the placement of students with autism in close proximity to their typical peers.

A recent study performed by Jones & Schwartz (2004), involved three preschoolers with *Autism Spectrum Disorder*. The purpose was to provide further research based on evidence that children with autism can benefit from modeling from peers, siblings, and adults for teaching novel language skills. The results indicated that all three children responded quickly and positively to modeling across all stimuli. There was not a preference for one particular model among target children. In fact, child models were as effective, if not more, than adult models.

Integrated Play Groups (IPG) were based on Vygotsky's *social constructivist theory*. The primary goal of IPG is to enhance the social and symbolic play of autistic children between the ages of three and 11. Integrated Play Groups consists of three main parts – guides, expert players, and novice players. Guides are group facilitators who are trained in implementing the IPG model and have experience working with autistic children. Expert players are normal developing peers with good social, communication, and play skills. Novice players are children with *Autism Spectrum Disorders*. The groups met at least twice a week for 30 minutes to an hour in a naturally integrated setting, such as a school, child care center, community program, or home (Lantz, Nelson, Loflin, 2004).

Lantz, Nelson, & Loflin (2004) started an IPG in a rural midwestern elementary school. The group consisted of two novice players, three expert players, and two guides. After seven intervention sessions, data were collected and compiled. The study revealed that the IPG program can be applied to a school setting. Although positive results were found, there were limitations. These limitations included the following: scheduling issues, staff communication, and student motivation. There are unpredictable events that may hinder the plans of the play-group sessions. This may include student and teacher absences, field trips, in-service programs, teacher preparation days, and early dismissals make scheduling complicated.

The literature involving peer tutoring contains conflicting evidence when using peer models as a means for teaching children with *Autism Spectrum Disorder*. One such weakness of peer tutoring with autistic children is that it sets up a potential relationship for one student to be in control of the other. Some researchers also stated that unless the peer model is to be used on multiple occasions to instruct multiple students, this approach may require too much valuable teacher time that could better be used doing direct instruction.

CHAPTER 3

GUIDELINES FOR IMPLEMENTING SOCIAL SKILLS TRAINING PROGRAMS

There are countless opportunities for children to play and interact with one another

during the typical school day. Throughout the day, typically developing students watch,

imitate, model, interact with one another, solve problems, learn to share, and collaborate.

They also build friendships that promote positive and social emotional development.

Children with autism do not have this luxury, for they must be taught the skills that come

naturally to other children without disabilities. The following guidelines can be utilized

by teachers, parents, and typically developing students when implementing a social skills

training program.

1. Social skills must be taught to children with autism.

Social interaction programs are designed to enhance relationships between children

with autism and their typically developing peers. The use of positive skills with peers

early on can lead to the development of positive peer relationships, acceptance, and

friendships (Bovey & Strain, 2003).

2. Steps must be followed to develop appropriate social skills for children with
   autism.

The first step in implementing a peer-involved social skills training program is to

define a skill. Skills should be chosen in relevance to the needs of the student. Each skill

should be discussed, along with any other relevant information pertaining to the step.

Next, the skill should be modeled, or taught by imitation. A wide variety of behaviors

can be learned, strengthened, weakened, or facilitated through modeling. Modeling is an

effective way to teach new behaviors. The third step involves identifying children's

current and future need for the skill. Fourthly, the first role player should be selected. All members of the group will be expected to role play each skill that is being taught. Young children should be encouraged, reassured, and reminded to use the skill to meet their own needs. The fifth step involves setting up the role play. When doing so, the main actor is chosen, who in turn selects a second person to play the role of the other person with whom he or she would use the skill in real life. The teacher then sets the stage for the role play by eliciting information needed. Next, the role play is conducted. The teacher reminds the actors to *think aloud* and provides any help or coaching needed to keep role playing according to the behavioral steps. If the role play is not going as planned, the scene can be stopped, needed instruction provided, and then role play will be resumed. Step 7 provides performance feedback. The co-actor is asked to react to the scenario first. After doing so, observers will comment and provide additional information about the role play. The teacher will comment using the following procedural steps: provide reinforcement only after role plays that follow the behavioral steps, provide reinforcement at the earliest appropriate opportunity after role plays that follow the behavioral steps, provide reinforcement to the co-actor for being helpful, vary the specific content of the reinforcement offered, and provide reinforcement in an amount consistent with the quality of the role play. The eighth step includes assigning skill homework. Following a successful role play, the student is asked to carry over the skill in his/her own real-life setting. The final step will involve the selection of the next role player (McGinnis & Goldstein, 2003).

3. There are several options to consider when developing a successful social skills program.

In order to develop an effective social skills training program, it is necessary to match social interaction programs to students' needs and settings. Educators must consider many options to stimulate interactions between groups. They must also recognize that not all general education children and adolescents are suited for social interaction programs. Reasonable social interaction expectations should be established. Increased social interaction enhances acceptance of persons with disabilities, facilitates social skill development, and promotes positive community attitudes towards children with autism. Ongoing instruction and monitoring should occur. General education students and students with autism interact most effectively when given continual instruction and feedback from an educator. It is important to maintain supervision on a consistent basis. The final component includes generalization and maintenance of social skills. Students with autism may learn to use social interaction skills in specific settings or conditions, but not understand that it may be used in other environments or circumstances. Therefore, generalizing skills across different settings is important. Maintaining these skills is vital as social interaction programs are often structured to teach particular skills to mastery. Following criterion achievement, instructors move to another skill. If these skills are not reviewed, students may forget and require new instruction to relearn the skill. Teachers should provide opportunities for students with autism to practice and maintain previously acquired skills (Simpson, Smith-Myles, Sasso, & Kamps, 1997).

The use of social skills training programs can provide the structure and supports needed to aide children with autism in developing increased needed social skills. After they learn these social skills, they can teach them to others.

CHAPTER 4

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The purpose of this literature review was to examine recent research on the effectiveness of social skills training for students with *Autism Spectrum Disorder* and to present guidelines for implementing social skills training programs for these children. To achieve this purpose, this paper addressed the following questions:

1. How can we promote social skills in autistic children?

There are four ways that socialization in autistic children can be promoted. They are direct instruction, antecedent prompting, peer initiation, and peer tutoring. There is little research surrounding the benefits of direct instruction of social skills and antecedent prompting.

2. What are the effects of Peer Tutoring for student with autism?

Many studies show that including typically developing children in social skill interventions provide children with autism the ability to observe, imitate, and learn social behaviors.

3. What are the guidelines for a social skills training program for students with autism?

The first step in implementing a peer-involved social skills training program is to define a skill that is relevant to the student. The skill should then be modeled or taught by imitation involving a series of *drawn out* steps. The social interaction program must

match the students' needs and settings. Educators must consider many options to stimulate interactions between groups. They must also realize that not all general education children are suited for social interaction programs. Social skill programs also require the need for ongoing instruction and monitoring. General education students and children with *Autism Spectrum Disorders* interact most effectively when given continuous instruction and feedback, for it is important for the teacher to supervise their exchanges on a continual and consistent basis.

## Conclusions

The following conclusions were drawn from this study:

1. In the last 20 years, there have been a variety of approaches used to improve social skills deficits in children with *Autism Spectrum Disorder*.

2. Without appropriate social skills, children have greater difficulty being integrated into their school and communities.

3. Involving peers in social skills interventions provide children with autism the opportunity to observe, imitate and learn from the social behaviors of their typically developing peers.

4. The use of social skills training programs can provide the structure and supports needed to aide children with autism in developing increased needed social skills. The use of positive skills with peers early on can lead to the development of positive peer relationships, acceptance, and friendships (Bovey & Strain, 2003).

Recommendations

Based on the review of the literature, the following recommendations are suggested:

1. More awareness about the success of social skills training is needed in order for more students with *Autistic Spectrum Disorder* will be able to learn with the help of their typically developing classmates.

2. More training programs are needed for children with autism. It is necessary to train typically developing peers model behavior and language for autistic children. The role of the teacher is to be the facilitator and supervise these interactions so that they can be maintained and eventually generalized into other environments.

3. More structure and the support of peer models to children with *Autistic Spectrum Disorder* is needed to increase autistic children's social skills in a less restrictive and natural way.

4. More research needs to be conducted to help autistic children adjust most effectively to the needs of society.

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