The ASHA Leader

January 17, 2012 Features

Come Play With Me

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Emily attends an inclusive preschool with typically developing children, has a severe autism spectrum disorder (ASD), and is minimally verbal. She can put two picture symbols together to request objects from adults and will imitate adult speech occasionally. All communication attempts are directed to adults, solely for the purpose of regulating their behavior. The teacher wants Emily to have more social opportunities and decides at center time to sit Emily at a table with two peers to do puzzles. Emily reacts by hitting the teacher, throwing puzzle pieces on the floor, and crying. She will not tolerate being in proximity to peers. The teacher is concerned that Emily is "not yet ready" to learn skills needed to engage in joint play with peers and fears for the peers' safety. After helping Emily finish the puzzle, the teacher lets Emily leave and go back to her favorite cushion to listen to music.

Social communication is reciprocal and involves give-and-take. Consider this scenario from the perspective of one of Emily's peers, Amy. Amy is sitting at the table doing a puzzle with another little girl. They are talking about the puzzle pieces and smile at each other as they race to finish. Amy looks up and sees Emily being coerced to sit in the chair next to her. Amy watches Emily as she hits the teacher and starts clearing the table of pieces. Amy is not happy about Emily's behavior and wonders why Emily acts that way when everyone else is having fun. She turns back to her friend and ignores Emily.

Social skill deficits are one of the fundamental features of autism. Brown and colleagues (2002) reviewed developmental and curriculum-based assessments that can be used to assess peer interaction skills of children with ASDs. Three subtests of the Batelle Developmental Inventory (BDI; Newborg, Stock, Wnek, Guidubaldi, & Svinicki, 1988) directly relate to young children's peer-related social competence. Two subscales of a curriculum-based assessment, the Assessment, Evaluation, Programming System (AEPS; Bricker et al., 2002) directly relate to children's peer interactions.

Assessment of peer-related social competencies includes gathering information from multiple sources—teachers, parents, and peers—and across multiple observations. Teacher questionnaires to assess the nature of social integration in inclusive preschools include the Playmates and Friends

Questionnaire (Goldman, Buysse, & Carr, 1997) and the Teacher Impression Scale From Play Time/Social Time (Odom & McConnell, 1993). Multiple observations of small-group interactions with typical peers in structured (e.g., 10 minutes of play with same sets of toys) and unstructured routine activities (e.g., recess games, snack, free play) will determine rates of specific behaviors.

Peer Intervention

Young children must have opportunities for successful social interactions for friendships to develop, and perhaps the greatest potential benefit of preschool experiences for children with ASDs is the opportunity to improve their social skills. In particular, inclusive preschool environments offer opportunities to involve typical preschoolers in the intervention process. Typically developing peers who are taught to initiate interaction and become responsive social partners to their classmates with ASDs are often referred to as peer intervention agents. Substantial literature testifies to the effectiveness of peer-mediated interventions to promote social skills in children with autism (Chan et al., 2009; McConnell, 2002; Reichow & Volkmar, 2010).

Many meta-analytic reviews, however, have misrepresented the literature evaluating interventions to promote social skills in children with ASDs, because they failed to include the bulk of the experimental research base—single-case experimental designs (e.g., Scottish Intercollegiate Guidelines Network, 2007). For example, Warren and colleagues conclude in the recent Agency for Healthcare Research and Quality comparative effectiveness review, "Therapies for Children With Autism Spectrum Disorders" (2011), that "Strength of evidence is insufficient to assess effects of social skills training on core autism outcomes for older children or play- and interaction-based approaches for younger children" (p. ES-7).

In contrast, reviews that have included analyses of single-subject designs have found much research support indicating that peer-mediated interventions can lead to improvements in social skills (Chan et al., 2009; Odom et al., 2003; McConnell, 2002; Reichow & Volkmar, 2010; Schneider, Goldstein, & Parker, 2008). Most of the more than 50 single-case experimental design studies contribute to the evidence of robust effects of social skills interventions for young children with ASDs.

Single-case experimental designs often are not included in meta-analytic reviews because of the lack of accepted procedures for estimating and interpreting effect sizes (Schlosser, 2009; Schneider et al., 2008; Wolery, Busick, Reichow, & Barton, 2010). Moreover, many researchers are unaware that these experimental designs are especially useful for finding large treatment effects but are poor detectors of small treatment effects. Although single-case experimental designs are especially useful for studying the process of behavior change, they are weak designs for generalizing to a population. The important role of replication and discussions of other quality indicators has contributed to a better understanding of the scientific and clinical merits of these designs (Horner et al., 2005; Janosky, 2005).

How-Tos

How can preschool educators and interventionists teach social skills to children with ASDs using typically developing peers as communication and play partners? We offer our top 10 pointers.

Set occasions for practice.

Setting the expectation for social interaction is helpful, but setting the occasion for practicing social communication with responsive partners is more important. Teaching typical peers to stay near and initiate interaction with children with ASDs is the key to successful peer-mediated interventions. Teaching typical peers to initiate and be responsive social partners is relatively easy and has been shown to be highly effective (Chan et al., 2009; English, Shafer, Goldstein, & Kaczmarek, 1997; McConnell, 2002; Reichow & Volkmar, 2010).

Teach typical peers how to facilitate interaction with reticent communicators.

The scenario with Emily highlights a number of important considerations for speech-language pathologists in their critical role to support the child with an ASD and the child's communication partners (ASHA, 2006). Placing a child with an ASD with typically developing preschoolers is not sufficient to facilitate social interaction and can sometimes lead to increased aberrant social behaviors. These behaviors may cause peers to become anxious or upset and leave the situation. This reaction, in turn, may reinforce the social avoidance of children with ASDs and further limit opportunities for future interactions. If Amy tries to interact with Emily without encouragement and reinforcement, she is not likely to persist. Training for peer mediators, therefore, is critical.

Keep it simple.

Use simple strategies (e.g., "stay-play-talk," Goldstein, English, Shafer, & Kaczmarek, 1997). Preschoolers can learn a variety of strategies, such as initiating play organizers (e.g., "Let's play house; you be the mommy.") and acts of affection (e.g., give high-fives or pats on the back). Preschoolers even can be taught to use incidental language teaching strategies, such as (a) wait for a child to initiate, (b) ask the child to label a desired toy, (c) give the child the requested toy, and (d) praise the child's appropriate request (McGee, Almeida, Sulzer-Azaroff, & Feldman, 1992), but use of these strategies may be hard to sustain.

We have found that simplicity is a key to success. Stay with your friend: Stay in the same area and watch what your friend does. Play with your friend: Suggest what to do or go along with what your friend likes to do. Talk to your friend: Talk about what you or your friend are doing and talk back to your friend; tell your friend if you don't understand.

To teach Amy how to "stay-play-talk" with Emily, the teacher could print out one page that depicts each of these three steps, along with colorful pictures of two children talking together during play. The teacher would model how to "stay-play-talk" with another adult, then have Amy practice with an adult, and then have Amy practice with Emily. Adult guidance and feedback is provided until Amy is using "stay-play-talk" strategies consistently during play routines with her new "buddy,"

Emily. These three steps encourage children to continue initiating and to be responsive but do not necessarily place great demands on either social interaction partner.

Preview the use of strategies in advance of activities:

"Amy, remember to talk about what Emily is doing. What toy is Emily going to want to play with in this activity? You can say things like, 'Let's make the music puzzle.' There are lots of instruments to talk about. Do you think you can help your friend play with you three times in this activity?"

Capitalize on common interests.

Pairing children with ASDs with peer buddies need not be an exact science. Most preschoolers are willing and able to be effective peer buddies. However, it is not unusual for children—particularly children with ASDs—to have preferences about what they like to do, what they like to talk about, and experiences they prefer to avoid. All peer buddies need not be compliant, laid back, and empathetic, but it is helpful to evaluate whether the children's interests seem compatible when forming pairings. In our opening scenario, Emily's motivation to stay and play may have been stronger if music was part of the peer social activity. Multiple buddy pairings with a child with an ASD also should be considered. Social relationships are likely to develop when pairs of children share common interests and regularly experience positive interactions.

Don't overburden typical peers.

Placing too many demands on typical peers is likely to work against continued use of facilitative strategies. When social skills interventions are concentrated during daily free play time, for example, typical peers may be sacrificing their play preferences to serve as buddies for classmates with ASDs. Spreading the expectations for serving as a buddy across the day and across more than one peer may dilute the burden and may promote generalization across partners, settings, and activities. Getting typical peers to maintain their use of facilitative strategies is the key: The more opportunities for positive interactions across the day in a variety of situations, the more likely that true relationships or friendships will develop.

Peer intervention alone may not be enough—but it's a good first step. Teaching peers to be intervention agents is easier than skill training for children with ASDs. When children need more help, teach specific skills to peers and the child with autism jointly so that peers learn the skills and can model them. Joint skills training also raises expectations for peer responding. Skills to teach may include how to gain a child's attention, initiate interactions or insert oneself into ongoing interactions, share and take turns, avoid or resolve conflicts, or play different roles in sociodramatic activities. Group friendship activities can be taught in large-group preschool settings such as circle time, calendar, and story time (Frea, Craig-Unkefer, Odom, & Johnson, 1999). Peers are taught to target children with autism using affectionate, physically appropriate social behaviors such as high-fives, tickles, pats on the back, and hugs during adult-led songs, games, or finger-plays. These

activities are fun for all children and can lead increased positive social interactions (McEvoy et al., 1988).

These skills can be taught using a standard protocol of adult introduction and modeling, guided practice (e.g., adult-child, then child-child), and corrective feedback. Children's communication methods may include a combination of verbal and/or augmentative and alternative communication (AAC) modes. If AAC systems are part of inclusive classrooms, peers should learn the systems to encourage social interactions across school activities. For example, Emily could be prompted to use a picture symbol to initiate a request to Amy, and Amy could be taught to "take-say-give" (i.e., take the picture symbol, say the object name, and give the object) within a highly motivating social activity.

Enhance generalization.

Providing opportunities for children to interact socially in varied—but similar—scenarios is likely to result in efficient learning and enhance generalization. Goldstein and Cisar (1992) taught a variety of sociodramatic play scripts to triads of children (two typical peers and a classmate with an ASD). Scripts involved the contributions of three roles to a play theme (e.g., a hospital with a doctor, nurse, and patient) and provided examples of actions, short utterances, or full sentences to adapt to children's language levels. Children practiced each of the roles during script training. Training proceeded more quickly with the introduction of successive scripts.

Observational learning is a potent learning mechanism.

Observation is most likely to result in learning when the modeled behaviors are consistent with the capabilities of the learner (i.e., not too developmentally advanced). Peers provide rich and diverse opportunities for learning social skills. Moreover, peers provide examples of age-appropriate behavior that are likely to be reinforced naturally by peers. Researchers have found that the more similar the model is to the learner, the more likely that observational learning will occur (Bandura, 1997; Bellini & Akullian, 2007). Therefore, the more opportunities children with ASDs have to interact socially with typical peers, the more likely they will learn social, communication, play, and motor skills through observation. These opportunities to learn new social skills can help children become more proficient communicators and social play partners, particularly with regularly occurring, highly motivating, and preferred activities.

Typically developing children do not learn inappropriate behavior from children with ASDs.

These concerns seem unwarranted, and typical children seem to benefit from their involvement as a peer intervention agent. Kamps and colleagues (1998) interviewed more than 100 peers without disabilities about being involved in peer-mediated social programs, and more than 90% expressed an interest in continuing in programs with classmates with autism. Preschoolers are unlikely to learn to demonstrate stereotypic or other aberrant behaviors if those behaviors are not reinforced by adults. Preschoolers will not identify children as "autistic" unless taught to do so by adults. In fact,

typical preschoolers often refer to children with ASDs as less mature, perhaps a little different, but not "disabled."

In social validity assessments, judges often focus on changes in social skills by the children with ASDs. However, after reviewing videotapes of social interactions before and after social skills intervention, viewers have sometimes commented on the sophistication of the typical peers. For example, during a fast food restaurant scenario, we might see typical peers enjoying a prolonged sword fight with straws. Although this behavior exemplifies positive social interaction, it pales in comparison to the children's ability to act out going into the restaurant, ordering, cooking, exchanging money, etc., then exchanging roles and playing another variation on the theme. The typical children are learning how to be empathetic and helpful to others and are building their social repertoires.

Social skills training does not inoculate children with ASDs as they transition to new classrooms or schools.

We were surprised by our inability to predict how well the preschoolers with ASDs would do when they transitioned to kindergarten and beyond. Some children, who seemingly had developed more than satisfactory social skills in preschool, were found to be socially deficient in kindergarten. Other children with ASDs exceeded our expectations. The minimal conditions necessary to maintain social skills are likely to vary but should include responsive peers and teachers who expect, encourage, and reinforce positive social interactions with sufficient frequency to promote maintenance of social skills. In some classrooms, that is not the case. We caution teachers to avoid segregating children with ASDs within inclusive settings (e.g., children with disabilities are grouped together in seating near the teacher or placed at the same table during lunch period). Teaching staff need to be aware of the importance of communicating expectations and support for social integration. When children with ASDs make successful transitions to new classrooms, they do not necessarily have old friends from their prior settings. Children with ASDs are more likely to experience successful transitions in classrooms where there is a true sense of belonging among all classmates.

Encourage peers to be candid with their buddies with ASDs about acceptable and unacceptable social behavior.

Sometimes it is as simple as giving the peer permission to express how he or she feels to the buddy and to discuss the meaning or intention behind unacceptable social behaviors. This type of peer feedback in natural social contexts can be more powerful and effective than adult responses at reinforcing appropriate social behaviors. Social demands in school and community settings continue to escalate; peers can play a supportive and instructive role in identifying what improvements and refinements are needed for children with ASDs to fit in socially.

In the case study of Emily, the SLP decided to implement a peer-mediated intervention in the preschool classroom. She created colorful graphic cues with simple behavioral steps for each of the three "stay-play-talk" steps and laminated each page to make a small book. The SLP then spent 20–

30 minutes over three days with Amy to teach her each of the three skills. The SLP also showed Amy short video clips of different ways children communicate, such as with picture symbols, words, and even screaming or crying to show they are upset.

Amy responded quickly. She soon was approaching Emily to invite her to play, offering Emily toys to share, and staying nearby in play. When Emily became agitated or upset, Amy would calmly remark, "It's okay, let's play _____" and bring one of her favorite toys over. Soon, Emily began to tolerate being next to Amy for longer and longer periods of time; she started to watch Amy during classroom activities, and she responded to Amy's initiations by giving toys, asking for toys with picture symbols, and smiling instead of crying. The teacher realized the many different social opportunities possible during a school day, and encouraged the girls to engage in brief and sometimes longer interactions. The main benefit was watching their friendship grow.

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cite as: Goldstein, H. & Thiemann-Bourque, K. (2012, January 17). Come Play With Me. The ASHA Leader.

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Peer Training Proves Key in Autism

Recent research indicates that peer social skills children for older children with autism spectrum disorders (ASDs) can be effective. The study looked at 60 children, ages 6 to 11, who had ASD and were mainstreamed in classrooms at least 80% of their day. The children were divided into four groups: The first group received one-on-one social skills training only; the second group

received no training, but three of their typically developing peers received training; a third group received one-on-one training and all peers also received training; and the fourth group received no training, and neither did peers.

The study found that children with ASDs whose peers received training were less likely to spend time alone on the playground compared with those who received only individual training. Additionally, children whose peers received training were more likely to be named as friends by classmates. The study was published in the *Journal of Child Psychology and Psychiatry*.