



Encouraging Positive Behavior With Social Stories

An Intervention for Children With Autism Spectrum Disorders

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Autism.

Asperger's syndrome.

Atypical autism.

Pervasive developmental disorder.

There seem to be more and more children diagnosed with one of these disorders. This article can help teachers in inclusive classrooms work with all their students to encourage positive behavior

and increase learning (see boxes, "What Is Autism Spectrum Disorder?" and "What Does the Literature Say?").

To take advantage of the appeal of both graphic and story elements for many students, teachers can design stories that encourage students to behave positively in social situations, such as eating lunch, playing in the playground, using the library, lining up, and working with other students in groups. Social stories have a long pedigree in a teacher's family of strategies.

Applying Social Stories in the Classroom

Learning to use social stories effectively does not require extensive training. Many educators can use social stories—classroom teachers, paraprofessionals, and related service personnel. The decision to include social stories in a behavior plan should be made by the individualized education program (IEP) team. As with any decision, team members should integrate social stories into the IEP or behavior support plan in a way that complements other interventions and strategies.

To ensure maximum benefit, teachers should use a systematic checklist for writing and using social stories. Based on the steps for conducting a functional assessment (O'Neill et al., 1997), we have identified six steps necessary for the effective use of social stories: identi-

What Is Autism Spectrum Disorder?

Educating students with autism spectrum disorders (ASD) in inclusive settings encompasses the challenge of providing adequate behavioral supports. ASD is an umbrella term that includes autism, Asperger's syndrome, atypical autism, pervasive developmental disorder, and childhood disintegrative disorder (National Research Council [NRC], 2001).

Autism is characterized by impairments in social interaction, communication, and behavioral repertoires that occur on a continuum of impairment from mild to severe (American Psychiatric Association, 2000). These characteristics are prevalent among the majority of persons with ASD. Because of impairments in their communication and social interaction skills, students with ASD are vulnerable to developing inappropriate behaviors (Koegel, Koegel, & Surratt, 1992).

Inappropriate behavior among students with ASD can negatively affect their ability to access services and participate in their community, as well as disrupt their development and learning (Dunlap & Fox, 1999). Behavior intervention has shifted from the narrow focus of reducing inappropriate behaviors to a more global perspective of improving quality of life (Carr et al., 2002).

Social stories are emerging in the research literature as user-friendly behavioral strategies that are effective in remediating inappropriate behaviors in students with ASD. The simplicity and utility of social stories make them functional in both general and special education settings.

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What Does the Literature Say About Using Social Stories as a Positive Behavior Support?

Definition. A social story is one type of proactive behavior intervention that was developed for use with students with autism and extended for use with students with ASD.

A social story is a short simple story written from the perspective of the student that provides instruction on positive, appropriate social behaviors (Gray & Carand, 1993). Positive behaviors include all behaviors that increase an individual's likelihood of success and satisfaction in school, work, community, recreational activities, and social and family life (Carr et al., 2002).

Students with ASD tend to be strong visual learners (Quill, 1995). Concomitantly these students often have difficulty with social interaction (Quill). A social story is one way to provide instruction in a medium of strength without the complexity of interpersonal interaction (Scattone, Wilczynski, Edwards, & Rabian, 2002).

Effectiveness of Social Stories. Over the past decade, social stories have become a popular intervention strategy among practitioners. Several popular press publications provide guidelines for creating social stories, in addition to including generic stories on common social situations (Gray, 1993, 2000).

Research has demonstrated that social stories can be effective across behaviors and settings. Social stories have been shown to reduce inappropriate behaviors, such as tantrum behaviors, inappropriate vocalizations, and social isolation, in the following settings:

- Inclusive classrooms (Norris & Dattilo, 1999).
- Self-contained classrooms (Scattone et al., 2002).
- Residential settings (Kuttler, Myles, and Carlson, 1998).

Social stories have also been effective in decreasing inappropriate behaviors in the home when implemented by family members (Lorimer, Simpson, Myles, & Ganz, 2002).

In addition to reducing inappropriate behaviors, social stories are effective in increasing prosocial behaviors such as initiating social activity and increasing flexibility during social activities (Feinberg, 2001) and teaching appropriate greeting behavior (Romano, 2002).

The research literature is further supported by anecdotal accounts of the benefits of social stories in improving the behavior of students with ASD (Rowe, 1999; Simpson & Myles, 1998; Swaggart & Gagnon, 1995).

Guide to Proactive Behavioral Interventions. Behavioral research gives three messages to practitioners.

- First, proactive intervention of inappropriate behavior should be the primary focus (NRC, 2001).
- Second, the goal of any intervention should be to replace the inappropriate behavior with a functional, appropriate equivalent behavior (Carr et al., 1999).
- Third, no single or group of interventions will be effective for the inappropriate behaviors of all students with ASD (Dawson & Osterling, 1997; NRC, 2001).

Given these challenges, it is important that the field acquire a deep toolkit of interventions that allow for extensive individualization of plans according to need.

fy the need, conduct a functional assessment (O'Neill et al.), include social stories as part of a comprehensive behavior support plan, write the social story, implement and monitor student progress, and evaluate using data (see Figure 1; O'Neill et al.).

Step 1: Identifying Target Behavior

The primary teacher (e.g., the general or special education teacher) or another team member (e.g., related service personnel, paraprofessional, or parent) must identify a target behavior. You should do this informally through regu-

Figure 1. Social Story Checklist

- Team identifies the need for behavior intervention.
- Functional assessment is completed.
- Social stories included in behavior plan.
- Social story is written.
- Social story is introduced and progress is monitored with data.
- Success is evaluated with data.

lar observation of the student or through more formal assessments. For example, a student may talk or vocalize at inappropriate times, have difficulty staying with a group, or be unable to follow the rules of a game.

The team can prioritize behaviors for intervention in a variety of ways:

- According to level of risk to the student or others.
- According to how irritating the behavior is.
- According to how isolating the behavior is.
- The behavior most likely to respond quickly to intervention.
- The first behavior in an escalation chain.
- The most difficult or entrenched behavior a student displays (Barlow & Hersen, 1984).

Step 2: Conducting Functional Assessment

Once you have selected the target behavior, you should conduct a functional assessment. The functional assessment provides a picture of what the behavior looks like and allows you to develop a hypothesis as to what causes or maintains the student's behavior. An informal functional assessment may take only 15 minutes, while a detailed, formal assessment could take several hours. A functional assessment should take only as long as required to obtain an accurate picture of the target behavior and to generate a hypothesis. Behavioral observations, interviews, and self-assessments are all useful tools

for data collection during a functional assessment (O'Neill et al., 1997).

One way to accurately assess a behavior is to collect data on the frequency or duration of the target behavior over several days. You need to know how frequently or how long a student engages in the behavior before you introduce the social story. Such data provide a baseline on which to compare the student's behavior after the social story intervention is in place. Without this information it is difficult to gain an accurate picture of how effective the social story was in changing behavior.

Step 3: Making a Plan to Include Social Stories

You and the team should use the data to select appropriate interventions once you have established a baseline and developed a hypothesis of why the behavior occurs. Social stories can be included as part of a comprehensive plan to change the student's behavior.

The IEP team should ensure that social stories are part of a balanced plan that includes other social-behavioral interventions. Because no strategy will be appropriate for all students, all

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behaviors, or all situations, the team should closely monitor the implementation of each new intervention to evaluate effectiveness. Once the team has agreed on the behavior plan, you can create a social story.

Step 4: Writing the Social Story

Using the guidelines established by Gray and Garand (1993), write a social story based on the information gathered from the functional assessment.

Figure 2. Examples of Sentence Types

Descriptive sentences

- The cafeteria can be very crowded during lunch.
- During assemblies, students sit on the floor and listen quietly to the speaker.

Directive sentences

- I get my lunch tray and stand at the end of the line.
- I will sit on the floor with my class.

Perspective sentences

- Other students are happy when I wait my turn in line.
- My teacher is proud of the class when we sit quietly.

For example, a functional assessment shows that a student's inappropriate physical contact while walking in line to the library occurs because the student is trying to rush ahead to reach the destination quickly. An appropriate social story would describe why the class travels in a line and gives specific directions for appropriate line-up behavior.

Text Guidelines. Gray and Garand (1993) have identified three types of sentences for social stories: descriptive, directive, and perspective (see Figure 2).

- Descriptive sentences provide information about what is happening during the target event.
- Directive sentences give the student specific instructions on how to behave.
- Perspective sentences provide information about how others think or feel about the event or the student's behavior.

A minimum of text should be used, with no more than one directive sentence per page and typically one to three descriptive or perspective sentences per page.

You need to write the stories carefully to be within the comprehension level of the target student. A well-designed story should include only one concept per page and text should be limited to one to four sentences per page, based

on the reading level of the recipient. The arrangement of words and sentences on the page should emphasize concepts and key points.

Remember to write the text in a way that ensures accuracy regardless of interpretation. Using terms that allow for flexibility (e.g., usually or try, instead of always or must) will make the story more applicable to real-life variation in events. Social stories were originally written using only text (see Figure 3). However, text is now frequently paired with simple line drawings, clip art, or photographs to support comprehension for students who have difficulty reading without picture cues (see Figure 4).

Graphic Guidelines. Picture cues are important tools for students with weak reading comprehension. You should ascertain, however, that the student is capable of understanding the types of pictures used in the story. Do this by informally assessing the student's ability to discriminate between pictures similar to the type of pictures that will be used in the story. Ask the following questions:

- Does the student look at pictures?
- Can the student identify the picture of a ball from a choice of two different pictures?
- Can the student identify the blue ball from a choice of two ball pictures?
- Can the student identify the bouncing ball from a picture of a bouncing ball and a motionless ball?

Pictures should provide an accurate representation of the key concept, and they should not contain any extraneous information. You can use the information gathered from this type of informal assessment to gauge the complexity of pictures that should be used in the social story.

Step 5: Using the Social Story With the Student

You can now introduce the social story to the student and include it as part of the student's regular schedule. The first time you read a social story to the student, ask a few questions to ensure comprehension.

Figure 3. Sample Social Story With Text Only

At my school, students eat lunch in the cafeteria.

The cafeteria can be very crowded at lunch.

When I go to the cafeteria, I get my tray and stand at the end of the line. I stay in line and wait with everyone else to get my lunch.

When I have to wait I can think of other things. I can think of a song or my favorite book.

Soon it will be my turn and I can choose my lunch.

Waiting in line is hard but I try my best to wait calmly. Everyone feels good when people wait their turn.

After the initial comprehension check, the student can read the story independently, read it aloud to an adult, listen to the story being read aloud, or listen to a recording of the story. There are no rules on how long a student will need to use a social story. Some students may need to read their stories every day for weeks or months, some may master the new behaviors quickly and no longer need the social story, and some may require occasional review of the story over time (Gray & Garand, 1993).

As long as the social story is being used, it should be kept in an accessible location within the student's view. For example, it could be kept in a folder and velcroed to the student's desk. This allows the student to access the story whenever necessary.

Step 6: Collecting More Data

After the student has begun to use the social story, you should continue to collect data on the target behavior in the same way it was collected during the

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functional assessment. The data should be reviewed as part of the evaluation process to assess how effective the social story has been, whether or not it needs to be modified, and whether or not the student's behavior is considered to be within an acceptable range.

You should begin data collection before you introduce the social story and continue after the intervention is concluded. You can thus compare baseline behavior with intervention behavior and determine whether the social story has had the desired effect.

It is difficult to complete an objective evaluation when dealing with long-term inappropriate behavior. Data can provide you with an objective source of information to help you frame daily behavior within the context of broader behavior patterns. Whenever possible, more than one person should do data collection, to ensure that the observations are reliable and objective.

Challenges of Using Social Stories

Although social stories are an effective intervention for students with ASD, we have found certain limitations. First, be sure that you write social stories within the student's reading comprehension level. Stories that are too complex will not be effective in communicating the important information to the student.

Second, although computers are often of interest to students with ASD, multimedia social stories have not yet been demonstrated to be effective (Hagiwara & Myles, 1999). Thus, at this point, traditional social stories should be used.

Finally, social stories are not designed to address all behavioral needs and should therefore always be implemented as part of a comprehensive educational and behavioral plan.

Final Thoughts

After successful implementation of one social story, a team may decide that social stories can be an appropriate intervention for additional behaviors. Once a student is familiar and comfortable using a social story, subsequent stories can be introduced. All social stories should be kept in a location where they are visible and accessible to the student.

Over time the student's behavior will guide the use of social stories. As behaviors become extinct some social stories will be used less frequently and