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Interventions That Work Pages 40-45

Faces of Autism

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Autism spectrum disorder is a complex phenomenon, affecting students in many different ways—and calling for individualized interventions.

First grader Christine is an animal lover with a gentle demeanor. She rarely seems interested in class activities; a whirlwind of other students transitioning between tasks doesn't even merit a glance. She often retreats to the classroom rocking chair. If the teacher tries to physically encourage her to join the group, Christine becomes limp and lies back so that moving her takes two people, one holding each extended hand. She almost never initiates conversation. The only time she seems to become engaged is during structured physical education time when the group has started a high-velocity activity like jumping jacks. Even then, she doesn't catch on until most of the others are almost finished.

Ninth grader Alex is an avid sports fan with an infectious smile. His written work is commendable—when he can find it. He frequently disrupts class, blurting out irrelevant comments while raising both hands. A walking thesaurus, he loves to "help" other students expand their vocabulary by offering replacement words during class discussions. At times, he chews on his shirt, or rocks back in his chair and puts both feet up on his desk. Unstructured transition periods—changing classes, eating lunch, riding the bus—are his worst times of the school day. He typically becomes louder, more frantic, and verbally insulting. His peers have virtually withdrawn from interaction with him.

Although Christine and Alex are obviously different, both are labeled as students with autism spectrum disorder.

A Wide Range of Behaviors

The American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders* (2000) identifies *autism disorder* using the following criteria: severe qualitative impairment in social interactions and verbal and nonverbal communication, with repetitive and stereotyped patterns of behaviors, interests, or activities. The manual differentiates *Asperger's disorder* by the fact that individuals with Asperger's do not demonstrate cognitive and language delays in early childhood.

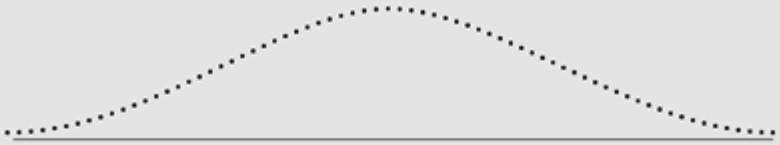
In the field of education, the Individuals with Disabilities Education Act of 2004 provides a similar definition, which schools use to determine eligibility for special education placement:

> a developmental disability significantly affecting verbal and nonverbal communication and social interaction, usually evident before age 3, that adversely affects a child's educational performance. Other characteristics often associated with autism are (1) engagement in repetitive activities and stereotyped movements, (2) resistance to environmental change or change in daily routines, and (3) unusual responses to sensory experiences.

Autism is fascinating because it manifests itself differently in each individual. As Stephen Shore, an adult with Asperger's and professor at Adelphi University, says, "When you have met one person with autism, you have met one person with autism" (personal communication, May 30, 2010). Because the characteristics of autism range along a continuum in five dominant areas— social skills, communication skills, restrictive/repetitive behaviors and interests, sensory responses, and cognitive abilities (see fig. 1, p. 43)—the term that most accurately describes this complex phenomenon is *autism spectrum disorder*.

Figure 1. Dimensions of the Autism Spectrum

Individuals on the autism spectrum exhibit a wide range of behaviors. This figure shows the continuum of characteristic behaviors—from disengaged on the left side to hyperengaged on the right side—in five dimensions. As the bell curve indicates, more individuals fall into the productive realm (requiring general, less intensive interventions) than into the extreme ends of the spectrum.



Less Productive Behaviors; Specialized Strategies		More Productive Behaviors; General Interventions	Less Productive Behaviors; Specialized Strategies	
Social Dimension				
Distant, avoids social interactions	Passive onlooker or observer during social interactions	Productive social interaction	Active participant, but with unusual engagement patterns	Dominates social exchanges
Communication Dimension				
No intentional communication	Intentional communication with errors in content, form, or use of language	Productive communication	Competent speech, but has some practical language difficulties	Highly verbal, but has significant errors in social uses of language
Repetitive/Restrictive Behavior Dimension				
Creates repetition in environment (e.g., flaps hands, spins wheels)	Compulsive collection of objects; hoarding (e.g., lint, trains)	Productive levels of interest and activity	Maintains singular focus; resistant to change; craves sameness	Manipulates discussions and work responses to preferred topic
Sensory Dimension				
Passive, withdrawn; underresponsive	Difficult to engage, preoccupied; responds to external sensory stimulation	Actively seeks sensory input for productive level of responsiveness	Anxious, distracted by environmental stimuli; responds to increased structure	Prone to system overload, aggressively seeks escape; overresponsive
Cognitive Dimension				
Significant learning problems	Literal comprehension; weak problem-solving skills	Productive cognitive skills	Unusual learning styles with some advanced skills (e.g., puzzles, drawing)	Superior memory in specialized areas

The goal is to keep students with autism spectrum disorder as productively engaged with class content and their peers as possible. So, if a teacher sees a student starting to disengage or becomeing hyperengaged, he or she can use specialized strategies to move that student back into a more productive mode.

Sources: Aspy, R., & Grossman, B. G. (2008). *Design comprehensive interventions for individuals with high-functioning autism and Asperger syndrome: The Ziggurat model*. Shawnee Mission, KS: Autism Asperger Publishing Company; Attwood, T. (2008). An overview of autism spectrum disorders. In Buron, K., & Wolfberg, P., *Learners on the autism spectrum: Preparing highly qualified educators* (pp. 19–38). Shawnee Mission, KS: Autism Asperger Publishing Company; Murray-Slutsky, C., & Paris, B. (2000). *Exploring the spectrum of autism and pervasive developmental disorders*. Austin, TX: Hammill Institute on Disabilities; Murray-Slutsky, C., & Paris, B. (2005). *Is it sensory or is it behavior?* Austin, TX: Hammill Institute on Disabilities.

Autism spectrum disorder affects an astounding 1 in 110 children today (Centers for Disease Control and Prevention, 2009). In the classroom, these students exhibit a wide range of unusual behaviors. Teachers may observe that they avoid eye contact with people; seem unable to read nonverbal cues, such as a teacher's warning glance of disapproval; tend to turn any group discussion to a topic of high interest to them; become anxious or resistant when confronted with a change in routine, such as a schoolwide assembly; or cover their ears when announcements come over the loudspeaker. Given such behaviors, what can teachers do to ensure the physical, academic, social, and emotional well-being of the student with autism as well as other students in the classroom?

First, it is important to understand that teachers don't need to work alone. A plethora of resources are available to help educators become more informed about this condition (see the list of online resources on p. 44).

Students with autism spectrum disorder require a comprehensive program of support involving teachers, speech therapists, occupational therapists, physical therapists, administrators, and parents. These professionals, working in Individualized Education Plan (IEP) teams, have many effective strategies at their command. Let's look at how some of these strategies could come into play in the cases of Christine and Alex.

Revisiting Christine

Christine misses information from her environment, appears passive and disinterested in classroom activities, and engages in limited communication. From a sensory perspective, she is an underresponder. Here is a collection of strategies that her teacher and service providers might use.

Infuse Movement

Because her teacher has observed that doing jumping jacks heightens Christine's alertness and enhances her ability to engage in group activities, physical movement is incorporated into Christine's transition to new activities throughout her day. It's important, however, to use movement effectively (Murray-Slutsky & Paris, 2005). Teachers tend to use one of the following three approaches; the third is most beneficial:

1. "When you finish reading with your group, then you can do 50 jumping jacks." This approach uses jumping jacks as a reinforcer. The teacher has made the doubtful assumption that Christine can focus on the reading activity before her sensory needs are met.
2. "I see that you're not joining the group for reading. Go do your jumping jacks." With this approach, the teacher reinforces the problem behavior (nonparticipation) with the intervention (jumping jacks), which teaches Christine how to avoid her reading group.
3. "It's time to go to your reading group. Please do 50 jumping jacks so that you are ready to read." With this approach, the teacher is preventing task avoidance by using the intervention to prepare Christine for her reading group activities.

Provide Structure and Visual Supports

The teacher primes Christine to transition more smoothly between tasks by providing visual supports, such as lists or picture descriptions of activities scheduled to take place (Myles & Adreon, 2001). To build on Christine's interest in animals, her teacher gives her a schedule at the beginning of each day with a picture of an animal representing each activity. Nonroutine events require special preparation. For example, when the teacher is planning to rearrange the classroom, she provides a combination of visual supports and movement: She puts the event on Christine's schedule for the day, creates a diagram to show her how the new arrangement will look, encourages her to physically help to rearrange her own space, and gives her the diagram before she enters the classroom the first few times after the move to remind her of the change. The teacher also shares the information with Christine's parents so they can remind her of the change.

Teach Social and Physical Skills

Christine's teacher and related service providers (for example, the speech therapist and occupational therapist) use a range of strategies and tools to help her learn to perform various social tasks, such as asking for help or initiating conversations with peers.

Social stories (Gray, 2010) and sensory stories (Nackley & Marr, 2007) are two useful tools for teaching skills to children on the autism spectrum. These stories are written from the point of view of a narrator with

autism spectrum disorder, who describes a situation that he or she might find difficult (such as lining up to go to the cafeteria or sitting with a group on the carpet). The story describes the situation, the important social cues, the events that might occur, how these events might make the narrator feel, and how the narrator copes with any difficulties he or she experiences.

Another visual aid for teaching social skills is power cards (Gagnon, 2001), which use a student's special interests to help him or her understand social situations, routines, the meaning of language, and the hidden curriculum. These cards typically have a script that complements a relevant visual on the actual card. For example, because Christine loves Scooby Doo, her teacher provides a power card with a picture of Scooby Doo eating a burger, with words stating, "Scooby Doo wants to know when lunch is. Scooby Doo looks at his schedule."

To help Christine build better muscle strength to enhance fine motor skills, her teacher adds sandpaper under the writing surface, has her write on an incline board, and gives her clay or putty she can use to form letters. To enhance her gross motor skills, the teacher allows Christine to sit on an inflatable cushion during small-group time and encourages her to participate in games that use movement, such as bouncing on a trampoline and jumping rope.

Use Self-Selected Reinforcement

The teacher encourages Christine to use her developing skills by providing reinforcers that reflect her interests and needs (for example, opportunities to take care of the class pet, quiet time in the rocking chair, books on animals, or coloring books with animals). She involves Christine in choosing these rewards by providing photographs of options paired with written descriptions and having her practice asking for the reinforcer as her skills develop.

Revisiting Alex

Alex represents a different type of learner with autism spectrum disorder. He has high verbal skills, but low ability to connect with people. He tends to seek input from the setting around him through constant movement and interaction. However, he quickly escalates from seeking sensory inputs to being an overresponder, overwhelmed and stressed by the very input he seeks. Alex's teaching team might try the following combination of strategies.

Implement a Functional Behavior Assessment

The Individuals with Disabilities Education Act recommends functional behavior assessment as a tool to help clarify and address problem behaviors. IEP teams use functional behavior assessments to look beyond the behavior itself to the student's underlying motivation. Steps include stating the problem in concrete, measurable terms; collecting data on the conditions in which the behavior occurs; and formulating and testing hypotheses on possible causes of the behavior (Alberto & Troutman, 2008).

Alex's IEP team conducts a functional behavior assessment to explore what causes his verbal interruptions and movement during class discussions. His team first defines the problem behaviors more specifically, noting that when classroom discussions move slowly or last longer than five minutes, Alex waves his hands in the air in response to every question, interrupts other students and the teacher, twists in his chair, and sometimes jumps up and roams around the room. Although his teacher initially feels that he is just seeking attention, his occupational therapist suggests that Alex needs to move to be ready to learn and needs active participation to remain engaged.

The teaching team develops a behavior intervention plan to help Alex control his verbal outbursts and hand raising; instead of calling out, he agrees to write his litany of comments and share them at the end of the activity. To support his use of the comments log, his teachers work with Alex to develop a reinforcement system that reflects his interests (for example, giving him two pennies at the start of class discussions to help him share only his "two-cents worth" of written comments orally, allowing him to decorate his comments journal with art reflecting his interest in Duke basketball, and rewarding him with

biographies of athletes). The team includes a self-management component by giving Alex a timer and reminding him to check his own behavior every three minutes (Did you write down your comments? Did you talk only when asked?).

Alex's teacher reminds him of the writing plan before each class discussion and develops a system (a reminder card placed on his desk) to signal when he goes off task. Alex's IEP includes the goal, *During class discussions, Alex will share verbal comments only when asked to do so by the teacher 90 percent of the time for 20 consecutive days*.

Provide Opportunities for Movement

Like Christine, Alex needs opportunities for movement throughout the day, particularly before class discussions or written assignments. It would be helpful if his schedule allowed him to take physical education first period, but because that's not possible, his teaching team has him start each day with a morning exercise routine. The school's physical therapist teaches him movements he can do throughout the day when he feels that he needs them (for example, chair push-ups and hand and leg exercises using elastic strapping attached to his chair). His teachers provide planned movement breaks, such as bringing books or supplies to the office or other classrooms.

Teach Self-Regulation

The physical exercises that Alex learns help him meet his own movement needs in less disruptive ways. His occupational therapist also teaches him a variety of other self-regulation strategies. For example, Alex learns to describe his emotional state on a continuum ranging from calm to overwhelmed using a version of the Incredible 5-point Scale. This tool, developed by Buron and Curtis (2003), is particularly effective with individuals with autism spectrum disorder because it allows them to distill emotional states into simple, visual, numerical terms. When he reaches a level 3 on the scale, he can ask to move to a calmer workplace. Alex's teachers also teach him steps for managing his anxiety in the cafeteria and on the bus by using sensory stories, which he views as PowerPoint slide shows on an iPod.

A Team Effort

Because autism spectrum disorder is becoming more prevalent, most teachers are likely to encounter learners with this condition at some point in their career. But enabling these learners to reach their full potential is not the teacher's job alone; it requires collaboration among a team of educators who use the wealth of resources now available and who are strongly supported by school leadership. Remembering to embrace the wonderful aspects of learners with autism spectrum disorder will make the journey an exciting one.

Online Resources for Information on Autism Spectrum Disorder

- Autism Society of America: www.autism-society.org
- Organization for Autism Research: www.researchautism.org
- National Professional Development Center on Autism Spectrum Disorders: http://autismpdc.fpg.unc.edu
- Ohio Center for Autism and Low-Incidence Disabilities: www.ocali.org
- Geneva Centre for Autism: www.autism.net
- Autism Speaks: www.autismspeaks.org

- State of the Art Resource Services: www.starservices.tv

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