Understanding Autism Spectrum Disorder

A handbook designed with parents in mind

Italy???

I'm often asked to describe the experience of raising a child with a disability to try and help people who have not shared that unique experience to understand it, to imagine how it would feel. It's like this….

When you're going to have a baby, it's like you're planning a fabulous vacation trip to Italy. You buy a bunch of guidebooks and make your wonderful plans. The Coliseum. Michelangelo's David. The Gondolas in Venice. You may learn some handy phrases in Italian. It's all very exciting.

After months of eager anticipation, the day finally arrives. You pack your bags and off you go. Several hours later, the plane lands. The stewardess comes in and says "Welcome to Holland!" "Holland?!?!?!?!?!" you say. "What do you mean Holland?? I'm supposed to be in Italy. All my life I've dreamed of going to Italy."

But there's been a change in the flight plan. They've landed in Holland, and there you'll stay.

The important thing is that they haven't taken you to a horrible, disgusting, filthy place full of pestilence, famine and disease. It's just a different place.

So you must go out and buy a new guidebook. And you must learn a whole new language. And you will meet a whole group of people you never would have met.

It's just a different place. It's slower paced than Italy, less flashy than Italy. But after you've been there for a while and you catch your breath, you look around and you begin to notice that Holland has windmills. Holland has tulips. Holland even has Rembrandts.

But everyone else you know is busy coming to and from Italy.

They're bragging about what a wonderful time they had there and for the rest of your life you will say, "Yes, that is what I had planned".

And the pain of that will never, ever, ever go away because the loss of that dream is a very significant loss.

But if you spend your life mourning the fact that you didn't get to Italy, you will never be free to enjoy the very special, the very lovely things about Holland.

Washington State School for the Deaf

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I.

The Stages of Normal Grief and the Family

The Stages of Normal Grief and the Family

No two children are identical, so having a label like autism spectrum disorder, cerebral palsy, cognitive impairment, or epilepsy does not mean your child will be like every other child with the same condition. No two families are the same, and so what applies to one family may not make sense for the next. Also, as families grow and age, their needs change. For each family, there will be a unique set of attitudes, beliefs, behaviors, and situations underlying their approach to raising a child with a disability.

You should be aware that all parents go through the stages of grieving. It is perfectly normal to go through these stages, not just once, but many times. Although you love your child, you will grieve that this is not the child you dreamed of.

Shock, Denial, Disbelief

These feelings are nature's way of protecting you from the reality of the news that your child has a disability. Perhaps you think he or she is going through a passing stage, maybe the doctor made a mistake in the diagnosis, or perhaps the test results were mixed up…anything that means your child doesn't have a disability. This tends to be a short-lived stage.

Guilt/Regret

Most parents wonder if they did something wrong to cause this to happen. The most frequently heard statements start with "If only I had…" All of these are thoughts, which you may or may not share with others. You may also question whether you could have changed the situations. Remember that we cannot change the past, but we do have control over much of the future.

Anger, Hate, Blame, Terror, Rage, and Jealousy

These are explosive emotions that you may feel. Although it is not logical, it is easy to blame others in this stage. These feelings are usually in reaction to the underlying feelings of pain, helplessness, fear, and hurt. All of these feelings are perfectly normal and must be expressed, not repressed. Expressing the feelings by talking them out is the key. Repressed explosive emotions lead to feelings of chronic low self-esteem, depression, guilt, and physical complaints. Having these feelings for an extended period of time may indicate the need to be seen by a trained therapist.

Loss, Emptiness, Sadness, Depression

When you imagined your life, chances are that, you never dreamed about having a child with any problems. Yes, your child is alive, but he or she is not the child you dreamed of. Part of the grieving process is to mourn the loss of the child that you expected to have.

Your sadness may be responded to, by those around you, with "It could be worse" scenarios. Allow yourself to be sad! You have every right to feel loss, emptiness, and sadness. Generally periods of sadness will be greater at certain times than others. If feelings become overwhelming, it may be classified as clinical depression. Symptoms such as sleep dependency, lack of concentration, and a sense of losing control warrant a therapist or doctor's attention.

"Pain becomes bearable when we are able to trust that it won't last forever, not when we pretend that it doesn't exist. "

-Alla Bozarth-Campbell

Acceptance

As parents of a child with special needs, you may be relieved to know that you will come to terms with the fact that your child has certain limitations. You may even feel, in looking back, that the challenge has made you stronger as a person and has strengthened your family.

It is important to note that you will go through these stages more than once, in any order, and with varying degrees of intensity. Birthdays, holidays, and special events may all trigger the cycle of grieving. Remember that communication is key. You may not be able to "cure" your child, but you can make a positive difference in his or her life.

Autism is not the end of the world…
just the beginning of a new one
just open your eyes---
and see.
-Sally Meyers

II.

What Is Autism Spectrum Disorder?

What is Autism Spectrum Disorder

http://www.nationalautismcenter.org/pdf/NAC%20Ed%20Manual_FINAL.pdf

As many front-line interventionists know, autism is characterized by severe difficulties in communication, socialization, and behavior (Klinger, Dawson, & Renner 2003). What this means it that for each individual child difficulties vary based on each one's cognitive ability, communication skills, and adaptive functioning. Symptoms must be present before the age of three, and must affect the child's functioning in more than one area of concern (i.e., home, school, or community). Moreover, symptoms cannot be better accounted for by other disorders associated with attention, behavior, thought processes, medical concerns, or mood. It can be found in all cultures of the world, and does not discriminate based on race, socioeconomic status, education of parents, or other demographic variables (Wong, Hui, & Lee, 2004; Howlin & Asgharian, 1999). Autism is three to four times more common in boys than in girls. It currently has no known cause or cure.

Examples of symptoms of Autism Spectrum Disorder in the *communication* domain include:

- The child must have a delay in or absence of language.
- The child does not compensate for a delay in language by using strategies like gestures to communicate.
- The child may exhibit problems with language, once language starts to develop. He may repeat phrases he has heard on television or from his parents or friends (echolalia).
- The child may immediately echo the speech of another individual (echolalia).
- The child often has trouble initiating and maintaining conversations with peers. She may also find it difficult to start and stop conversations. The child often has significant difficulty with, or cannot respond to, open-ended questions.
- The child may exhibit significant delays in play skills.

Examples of symptoms of Autism Spectrum Disorder in the *social* domain include:

- The child may poorly modulate eye contact.
- The child may have a blank expression, or difficulty expressing a range of facial expressions.
- The child may be capable of displaying many different facial expressions, but still fails to convey his emotional state to others.

- The child may have difficulty incorporating *nonverbal* communication in his

speech or social interactions. Most people talk with their hands, make subtle movements with their eyes and head to indicate the conversations should continue or end, and engage in other slight nonverbal gestures as a way of communicating. In fact, 80% of communication is nonverbal in nature! Most children with autism do not know how to use gestures effectively. These children may not realize the significance of specific gestures, and may therefore use them inappropriately.

- The child may have significant problems making and maintaining friendships. A younger child with autism will often play alone or have difficulty joining group activities. She may also engage in earlier stages of play, such as parallel play, when her peers engage in more interactive play. An older child may not have a "best friend" or social group. He may prefer solitary activities such as playing video games all day, or setting up elaborate play schemes with action figures that cannot be altered by others.
- The older child with autism may not understand personal boundaries, and will either stand too close or too far away from peers.
- The child may have difficulty with "social or emotional reciprocity," which can be loosely translated as the give and take of an interaction. Some common challenges with reciprocity for children with autism include:
    - ✓ Turn-taking activities, particularly for younger children.
    - ✓ Expressing empathy when others are upset or distressed. This becomes more problematic as children age and emotional and social concerns move to the forefront.
    - ✓ Offering comfort when another person is crying, or joining in when someone is extremely happy.
    - ✓ Sharing accomplishments or seeking praise.
    - ✓ Understanding their role in relationships. This can be the biggest challenge for children on the spectrum, as they often do not realize how their behaviors affect those around them.
    - ✓ Knowing how to alter their behavior to better meet the needs of others.

Examples of symptoms of Autism Spectrum Disorder in the restricted, repetitive, nonfunctional patterns of *behavior, interests, or activities* include:

- The child may exhibit strong interests in a specific topic or toy. Children with autism have been known to have extreme interests, such as memorizing train schedules or dates in history, or categorizing all aspects of aquatic life. They may have extremely well-developed memory skills, and be able to easily recall things that occurred many years ago. Many children gravitate to numbers, letters, and

colors in their play and communication with others. Some children become fixated on videos such as *Thomas the Tank Engine*, or watching segments of the movie over and over.

- The child may have extremely rigid ideas about time, travel, and daily routines. He might become highly agitated if his routine is altered.
- The child often thrives on structure, and can have difficulty adjusting when school vacation starts, or the family moves to a new home. This rigidity can be seen in a child's play as well. Some children insist that play sequences unfold in a certain manner, and become annoyed or withdrawn if the play sequence is altered by peers or adults.
- Probably one of the most obvious symptoms of Autism Spectrum Disorder includes the atypical body movements that are sometimes associated with this disorder. Although not always indicative of autism, these symptoms are often the first things people notice in terms of atypical behavior. For instance, some children really enjoy spinning their bodies in circles for much longer than their peers could sustain. Other children engage in full or partial body rocking, and may position their bodies in unusual ways. Children will sometimes run in ritualized patterns on the playground or in the home. They may walk on their toes or flap their hands. At times, they may flick their fingers or cross them in unusual ways.
- The child may experience sensory challenges, and will be either over or under sensitive to temperature, texture, smell, or sound. It is not uncommon for the child to refuse to wear specific types of clothing or sleep on sheets that are not made of a specific material.
- The child often engages in unusual play-based behaviors. She will line up her toys, categorize them, or place them in various positions that cannot be altered. Some children enjoy watching objects fall, and will repetitively drop objects such as balls, water, sand, etc. Other children enjoy spinning items, and will spin toys, plates, forks, lids, or other things that are not meant to be spun.
- The child may visually examine his toys or objects in their environments. He may peer at objects out of the corner of his eye, but also may place them directly in his field of vision, moving them in and out of that field. Often, a child will flip over a toy car and flick the wheels while watching them spin, or lie on the floor and watch the wheels move as he pushes the car.

Autism Today

There has been much discussion as to why the rate of autism has been steadily increasing since the 1990s. One reason is linked to the change in diagnostic classification in 1994. At that time, the diagnostic criteria for autism expanded to include children who were not previously considered "on the spectrum." Studies have shown that, despite this change in diagnostic criteria, the number of diagnosed cases of ASD is much higher than expected (Johnson & Myers, 2007). Many researchers believe the increase in the number of cases of autism worldwide is due to a combination of genetic and environmental factors (Folstein & Rosen-Sheidley, 2001). Researchers are working diligently to seek answers for families about the cause of autism.

Misperceptions about ASD

When people think of ASD, they often conjure up images of individuals with severely impaired language who are living in institutions, similar to Dustin Hoffman's character in the movie *Rainman*. This is typically not the case. While it is true that some children remain nonverbal, many children with ASD have some form of verbal communication skills. They often develop these skills as a result of treatment provided by school and allied health professionals who are committed to evidence-based practices. Another commonly held assumption that has evolved over time is that all children with ASD have intellectual disabilities. It is true that, in the past, over 80% of children diagnosed with ASD also met criteria for mental retardation. However, with early diagnosis and access to effective treatments, these numbers are decreasing (Chakrabarti & Fombonne, 2005).

Autism Across the Lifespan

The symptoms exhibited by a student with ASD may change over time. A child who receives speech services at age 3 may face very different communication challenges by the time she reaches her high school years. Each developmental stage brings its own challenges for all children, and this holds true for students on the spectrum. You are more likely to see certain symptoms in the toddler years, but these symptoms may be extremely subtle or non-existent by the time the student reaches adolescence. This pattern of development can be very confusing for individuals unfamiliar with the autism spectrum because they expect the same symptoms to remain fairly constant over time. In fact, some of these individuals may doubt whether an ASD diagnosis is warranted due to preconceived notions about what a student with ASD should "look like" at certain ages.

III.

Characteristics of Autism Spectrum Disorder

Characteristics of Autism Spectrum Disorder

www.autism-society.org

While understanding of Autism Spectrum Disorder has grown tremendously since it was first described by Dr. Leo Kanner in 1943, most of the public, including many professions in the medical, educational, and vocational fields, are still unaware of how Autism Spectrum Disorder affects people and how they can effectively work with individuals with Autism Spectrum Disorder. Contrary to popular understanding, many children and adults with Autism Spectrum Disorder may make eye contact, show affection, smile and laugh, and demonstrate a variety of other emotions, although in varying degrees. Like other children, they respond to their environment in both positive and negative ways. The symptoms and characteristics of Autism Spectrum Disorder can present themselves in a wide variety of combinations, from mild to severe. Although Autism Spectrum Disorder is defined by a certain set of behaviors, children and adults can exhibit *any combination* of the behaviors *in any degree of severity*. Whatever the severity, children with Autism Spectrum Disorder can learn and function productively and show gains with appropriate educational treatment. It is important to remember that the following are *some* common characteristics, no two people with Autism Spectrum Disorder experience the world or behaves in the same way;

- Insistence on sameness; resistance to change
- Difficulty in expressing needs; uses gestures or pointing instead of words
- Repeating words or phrases in place of normal, responsive language
- Laughing, crying, showing distress for reasons not apparent to others
- Prefers to be alone; aloof manner
- Challenging behaviors such as frequent tantrums, aggression, self-injury or severe withdrawal
- May not want to cuddle or be cuddled
- Little or no eye contact
- Unresponsive to normal teaching methods
- Uneven skill development or "splinter skills;" some skills are normal or superior for their age while others show significant delay
- Poorly developed social skills and unusual play with toys
- Certain behaviors exhibited to stimulate the senses, such as spinning objects, switching a light on and off, repeatedly opening and closing doors
- Inappropriate attachments to objects
- No real fear of danger/Apparent over-sensitivity or under sensitivity to pain

IV.

Your Family & Autism Spectrum Disorder

Siblings Interacting with the Community

Your Family & Autism Spectrum Disorder

Tips for parenting your child with Autism Spectrum Disorder

Pay attention to your child's environment and routine:

- Keep the environment predictable and familiar, and prepare your child for changes.
- Provide structure and routine.
- Pay attention to sensory input from the environment such as noise, temperature, smells, lots of people around, etc.

When you talk to your child:

- Be logical, organized, clear, concise, and concrete. Avoid jargon, double meanings, sarcasm, nicknames, and teasing.
- Explain abstract concepts in concrete terms.
- Don't talk about your child in front of him/her, unless you include them in the conversation.

To help your child improve their behavior:

- Help your child learn to communicate using gestures, sign language, picture boards, communication devices, and/or speech. Work on communication early, and be consistent to help your child improve. Better communication will help relieve frustration and may lead to better behavior.
- Teach your child to make choices.
- Be consistent in rewarding positive behavior.
- Replace an unwanted behavior with a favorite activity. In other words, use distraction.
- Choose rewards you know your child will like.

All children need love and compassion.

Recommendations for Siblings of Children with Autism Spectrum Disorder

Siblings of children with Autism Spectrum Disorder have their own unique issues that they are forced to deal with and yet are often overlooked. For example, they frequently have more responsibilities for the care of their sibling with Autism Spectrum Disorder than those whose siblings develop normally. Siblings of children with Autism Spectrum Disorder also commonly face social situations in which they must describe to peers why their sibling is "different," handle temper tantrums or noncompliance of their sibling, and attend treatment programs and services that they may or may not feel comfortable participating in. They experience a wide range of emotions as a result of having a sibling with autism such as shame, guilt, frustration, anger, happiness, or being proud. Siblings of children with Autism Spectrum Disorder typically feel neglected at times and uninformed about why their sibling is different.

To help siblings of children with Autism Spectrum Disorder, researchers have made a number of recommendations. First, parents and professionals should provide the siblings with age appropriate information regarding Autism Spectrum Disorder and the specific strengths and difficulties their brother or sister may have. Secondly, the siblings should be provided with opportunities to meet other siblings of children with special needs and to discuss feelings and experiences. Doing so will help to increase a sense of belonging and reduce the misconception that no one else understands what s/he may be going through. A third recommendation is to encourage and establish good communication within the family. Open discussions should occur frequently. Parents

should also ensure that they spend special, one-on-one time with each sibling to learn more about each child's experiences and to create a secure bond with each child. Finally, it may be helpful for parents and professionals to involve the siblings in the future plans of the child with Autism Spectrum Disorder. Involvement in the current treatments, goals, and future plans, may help to reduce siblings' uncertainty and worry and to create a sense of importance within the family.

Parents should also consider the siblings' needs when choosing treatment programs and services for their child with Autism Spectrum Disorder. Parents should ask the following questions when exploring options: 1) Are siblings included in the service's definition of family, 2) Does the service reach out to the siblings specifically and how, 3) Does the service educate the staff about sibling issues, and 4) Does the service offer programs specifically designed for the siblings? Programs for siblings of children with autism should be motivating and ensure that they are active participants in the activities. The programs should also focus on team-building and provide times for open discussions. Descriptions of autism and the implications on the family should be readily available as well. The programs should offer diverse experiences and topics for the siblings.

WEBSITE RESOURCES: www.seattlechildrens.org
www.kidstogether.org
www.cindysautisticsupport.com

Interacting With the Community

As a parent of a child with Autism Spectrum Disorder, you will find that you may have to deal with some negativity regarding your child's behavior. This can come from total strangers or even from friends and extended family members. People may try and give you advice or question your parenting skills. It is helpful to be prepared for these situations and think about how you may respond. Unfortunately, there are no easy answers.

There are some strategies that parents can use when people are being negative. One of the most powerful ways to deal with negativity is to educate. Tell people the truth. Make sure people at church, work, etc., know your son or daughter has Autism Spectrum Disorder. Autism Spectrum Disorder has received a lot of media attention in the past few years so most people are at least aware of what is involved. If a stranger gives you a dirty look or scolds you for your child's behavior when he/she has an outburst in a public place, have a statement ready. Something like "My son has Autism Spectrum Disorder. He has trouble with communication and social situations because he doesn't always understand what is expected of him or can't tell us what he needs" should be sufficient. You may find that the more educated people are about your child's needs, the more helpful they may be.

If you can't change peoples minds, often just avoiding them is perfectly healthy and, in some cases, easy to do. Of course, there are some cases, such as relatives where this is harder.

Try to seek out a support network that really supports the relationship with your child. Don't let anyone alienate you from your child. Finally, recognize the positive aspects of your child and share them with others. There may be a long list of things your child can't do, but try and make a list of the things he/she can do.

V.

Working With Professionals

Working with Professionals

In addition to your child's teachers, the following professionals may be included in your child's treatment/educational program.

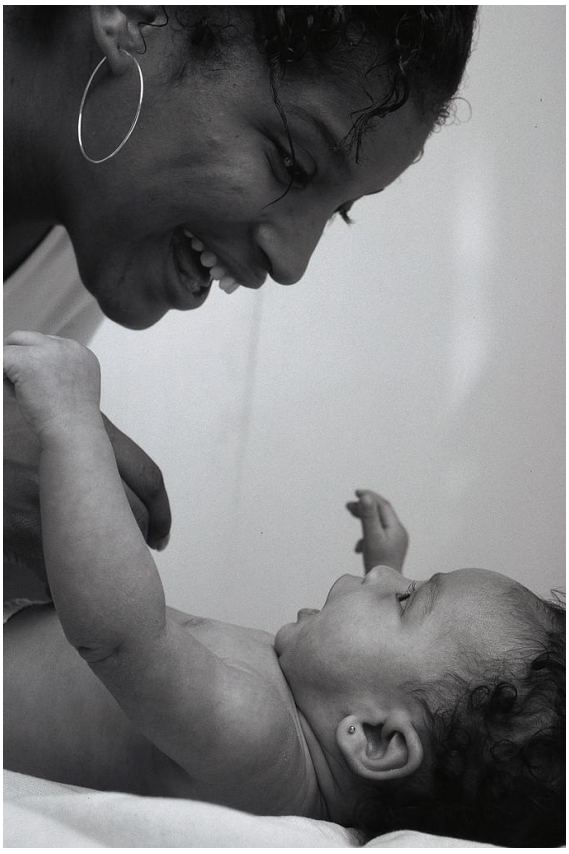
- Developmental Pediatrician - Treats health problems of children with developmental delays or handicaps.
- Child psychiatrist - A medical doctor who may be involved in the initial diagnosis; can prescribe medication and provide help in behavior, emotional adjustment, and social relationships.
- School Psychologist - Specializes in understanding the nature and impact of developmental disabilities including Autism Spectrum Disorders. May perform psychological and assessment tests and may help with behavior modification and social skills training.
- Occupational Therapist - Focuses on practical self-help skills that will aid in daily living such as dressing and eating. They may work on sensory integration, coordination of movement, and fine motor skills.
- Physical Therapist - Helps to improve the use of bones, muscles, joints, and nerves, to develop muscle strength, coordination, and motor skills.
- Speech/Language therapist - Involved in the improvement of communication skills including speech and language.
- Social Worker - May provide counseling services or act as case manager helping to arrange services.
- Teacher Consultant for Autism Spectrum Disorder - Provides information and consultation to school staff, agencies, and families.

It is important that parents and professionals work together for the child's benefit. While professionals will use their experience and training to make recommendations about your child's treatment options, you have unique knowledge about his/her needs and abilities.

Once a treatment program is in place, communication between parents and professionals is essential to monitor the child's progress. Here are some guidelines for working with professionals:

- Be informed. Learn as much as you can about your child's disability so you can be an active participant in determining care. If you don't understand terms used by professionals, ask for clarification.
- Be prepared. Be prepared for meetings with doctors, therapists, and school personnel. Write down your questions and concerns, and then note the answers.
- Be organized. Many parents find it useful to keep a notebook, binder, or folder detailing their child's diagnosis and treatment, as well as meetings with professionals.
- Communicate. It's important to ensure open communication - both good and bad. If you don't agree with a professional's recommendation, for example, say ***specifically*** why you don't.

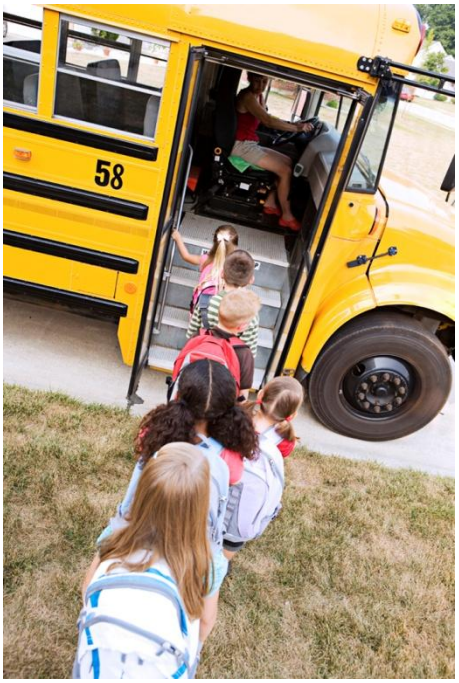
Taken from www.autism-society.org



VI.

Educational Programming/Treatment Options and Complementary Approaches

Educational Programming



Educating children with Autism Spectrum Disorder is a challenge for both parents and teachers. These children are individuals first and foremost with unique strengths and weaknesses. Some may be of average to above average intelligence, while others may be below average. Academic goals need to be tailored to that individual's intellectual ability and functioning level.

Educational programming for students with Autism Spectrum Disorder often addresses a wide range of skill development including academics, communication and language skills, social skills, self –help skills, behavioral issues, and play/leisure skills.

Parents and professionals need to work together. Teachers should have some understanding of the child's behavior and communications skills at home, and parents should let teachers know about their expectations, as well as what techniques work at home. Open communication between school staff and parents can lead to a better evaluation of the student's progress. Just as school goals, such as calculating the money needed to purchase groceries can be reinforced at home, parent goals for outside of school, such as the development of leisure activities, can be reinforced at school. Cooperation between parents and professionals can lead to increased success for the individual with Autism Spectrum Disorder.

Treatment Options

While there is not cure for Autism Spectrum Disorder, there are treatment and educational approaches that may reduce some of the challenges associated with the disability. Intervention may help to lessen disruptive behaviors, and education can teach self-help skills that allow for greater independence. But, just as there is no one symptom or behavior that identifies children with Autism Spectrum Disorder, there is no single treatment. The lifetime costs associated with Autism Spectrum Disorders are high; $3.2 million per individual (Ganz, 2007). We can reduce these costs by choosing and providing treatments that have evidence of effectiveness (e.g., Behavioral Package, Modeling, Peer Training Package, Schedules, etc.). These are called **Evidence-Based Practices**.

Most professionals agree that individuals with autism respond well to highly-structured, specialized education programs, designed to meet the individual's needs. Based on the major characteristics associated with Autism Spectrum Disorder, there are areas that are important to look at when creating a plan; Social skills, communication, behavior, adaptive behavior, and increased independence. Programs sometimes include several treatment components coordinated to assist a person with Autism Spectrum Disorder. For example, one individual's program may consist of speech therapy, social skill development, and the use of medication, all within a structured behavior program. Another child's may include social skill development and dietary changes.

Recently, the National Professional Development Center on Autism Spectrum Disorders has identified 24 practices that meet the criteria for evidence-based practice for children and youth with Autism spectrum Disorders.

Antecedent-Based Interventions
Computer-Aided Instruction
Differential Reinforcement
Discrete Trial Training
Extinction
Functional Behavior Assessment
Functional Communication Training
Naturalistic Intervention
Parent-Implemented Intervention
Peer-Mediated Instruction and Intervention
Picture Exchange Communication System
Pivotal Response Training
Prompting
Reinforcement
Response Interruption/Redirection
Self-Management
Social Narratives
Social Skills Groups
Speech Generating Devices
Structured Work Systems
Task Analysis
Time Delay
Video Modeling
Visual Supports

Antecedent-Based Interventions (ABI)

National Professional Development Center on Autism Spectrum Disorders

Antecedent-Based Interventions (ABI) is an evidence-based practice used to address both interfering and on-task behaviors. This practice is most often used after a functional behavior assessment (FBA) has been conducted to identify the function of the interfering behavior. Most of the studies in the evidence base focused on determining the effectiveness of ABI procedures to reduce repetitive, stereotypical, self-stimulatory, and self-injurious behaviors in learners with ASD. In one study, researchers also analyzed the effects of ABI strategies on engagement and on-task behavior. ABI strategies are a collection of strategies in which environmental modifications are used to change the conditions in the setting that prompt a learner with ASD to engage in an interfering behavior. For example, many interfering behaviors continue to occur because the environmental conditions in a particular setting have become linked to the behavior over time. The goal of ABI is to identify factors that are reinforcing the interfering behavior and then modify the environment or activity so that the factor no longer elicits the interfering behavior. Common ABI procedures include 1) using highly preferred activities/items to increase interest level, 2) changing the schedule/routine, 3) implementing pre-activity interventions (e.g., providing a warning about the next activity, providing information about schedule changes), 4) offering choices, 5) altering the manner in which instruction is provided, and 6) enriching the environment so that learners with ASD have access to sensory stimuli that serve the same function as the interfering behavior (e.g., clay to play with during class, toys/objects that require motor manipulation). ABI strategies often are used in conjunction with other evidence-based practices such as functional communication training (FCT), extinction, and reinforcement.

With what ages are ABI effective?

According to the evidence-based studies, this intervention has been effective for learners with ASD who ranged in age from 3 to 16 years.

What skills or intervention goals can be addressed by ABI?

ABI strategies are most often used with learners with ASD who exhibit interfering behaviors, especially self-injurious, repetitive, and stereotypical behaviors. The studies in the evidence base also focused on promoting engagement and on-task behaviors in learners with ASD.

In what settings can ABI be effectively used?

The evidence-based studies were conducted mainly in clinic-based settings or in one-to-one teaching sessions with learners with ASD. However, in one study, ABI procedures were implemented in a combination of settings (i.e., regular classroom, resource room). Although most of the research did not demonstrate the use of ABI strategies in more naturalistic settings (e.g., during ongoing classroom routines and activities, in the home, in community-based settings), the results of the one study conducted in a regular classroom suggest that ABI procedures could be effectively implemented in more naturalistic settings as well.

Computer-Aided Instruction

National Professional Development Center on Autism Spectrum Disorders

Computer-Aided Instruction (CAI) includes the use of computers to teach academic skills and to promote communication and language development and skills. It includes computer modeling and computer tutors.

With what ages is Computer-Aided Instruction effective?
The evidence-base for CAI includes studies conducted with learners ranging from 3 years to 18 years of age. Within the domain of communication skills and in the area of academics and cognition, the research has shown success with early childhood through secondary age learners. In short, depending on the targeted skill and the needs/preferences of the learner, CAI may be used with nearly any age.

What skills or intervention goals can be addressed by Computer-Aided Instruction?
Computer-Aided Instruction can be used effectively to address academic and communication/language skills. In the academic domain, evidence-based research focused on vocabulary and grammar. Within the communication domain, evidence-based studies targeted communicative functions and initiations. One study taught the recognition and prediction of emotions in others.

In what settings can Computer-Aided Instruction be effectively used?
Studies that comprise the evidence-base were conducted in clinical or school settings and across preschool, elementary, middle, and high school age groups. Although no research studies identified the home as a context for intervention, application of Computer-Aided Instruction in this setting seems logical.

Differential Reinforcement of Other Behaviors

National Professional Development Center on Autism Spectrum Disorders

Differential Reinforcement (DR) of other behaviors means that reinforcement is provided for desired behaviors, while inappropriate behaviors are ignored. Reinforcement can be provided: (a) when the learner is *not* engaging in the interfering behavior, (b) when the learner is engaging in a specific desired behavior other than the inappropriate behavior, or (c) when the learner is engaging in a behavior that is physically impossible to do while exhibiting the inappropriate behavior. Differential Reinforcement (DR) is a special application of reinforcement designed to reduce the occurrence of interfering behaviors (e.g., tantrums, aggression, self-injury, stereotypic behavior). The rationale for DR is that by reinforcing behaviors that are more functional than the interfering behavior or that are incompatible with the interfering behavior, the functional behavior will increase, and the interfering behavior will decrease.

With what ages is Differential Reinforcement effective?
Differential Reinforcement is effective for a range of learners. The evidence base supports the use of Differential Reinforcement for children from age four to twelve. In middle school settings, Differential Reinforcement may be integrated into self-management plans.

What skills or intervention goals can be addressed with Differential Reinforcement?
Differential Reinforcement procedures are most commonly used to reduce challenging or interfering behaviors, as well as to increase pro-social or desired behaviors. Within the articles that comprise the evidence base, Differential Reinforcement has been shown to be effective in reducing interfering behaviors and to increase communication/language skills.

Where has Differential Reinforcement been effectively used?
Differential Reinforcement can be used in a variety of settings. For example, Differential Reinforcement can be used effectively in both classroom and home environments. Educators working with learners can use Differential Reinforcement as part of a self-management system or as part of an educator directed behavior plan.

Discrete Trial Training (DTT)

National Professional Development Center on Autism Spectrum Disorders

Discrete Trial Training (DTT) is a one-to-one instructional approach used to teach skills in a planned, controlled, and systematic manner. DTT is used when a learner needs to learn a skill best taught in small repeated steps. Each trial or teaching opportunity has a definite beginning and end, thus the descriptor discrete trial. Within DTT, the use of antecedents and consequences is carefully planned and implemented. Positive praise and/or tangible rewards are used to reinforce desired skills or behaviors. Data collection is an important part of DTT and supports decision making by providing teachers/practitioners with information about beginning skill level, progress and challenges, skill acquisition and maintenance, and generalization of learned skills or behaviors.

With what ages is DTT effective?

DTT can be used to teach students from early childhood through elementary school at all ability levels. Due to the intensive and repetitive nature of DTT, there is more evidence for using DTT with younger children (i.e., 2 to 9 years of age).

What skills or intervention goals can be addressed by DTT?

DTT has been shown to have positive effects on children's academic, cognitive, communication/language, social, and behavioral skills. DTT can also be used to teach attending, imitation, and symbolic play skills.

Where has DTT been effectively used?

DTT can be taught in home, school, or community settings. Because discrete trials are often carried out in an intensive and repetitive fashion, quiet areas with limited distractions are often used

Extinction

National Professional Development Center on Autism Spectrum Disorders

Extinction is a strategy based on applied behavior analysis that is used to reduce or eliminate unwanted behavior. Extinction involves withdrawing or terminating the positive reinforcer that maintains an inappropriate interfering behavior. This withdrawal results in the stopping or extinction of the behavior. The interfering behavior is likely to increase in frequency and intensity (extinction burst) before it is extinguished as the learner seeks to elicit the reinforcers previously provided. Extinction is often used with Differential Reinforcement to increase appropriate behaviors while discouraging the use of inappropriate behaviors.

With what ages is Extinction effective?
Extinction can be used effectively with children and youth in early childhood, elementary, and middle school settings.

What skills or intervention goals can be addressed by Extinction?
Extinction procedures are most commonly used to reduce challenging or interfering behaviors. Within the articles that comprise the evidence base, extinction has been used to successfully reduce interfering behaviors (disruptive or restricted behaviors that interfere with optimal development, learning, and/or achievement).

In what settings can Extinction be effectively used?
Extinction procedures should only be used after other more positive interventions have been tried and shown not to work. Extinction procedures should only be used by an individual who is familiar with the learner and who can create a plan for dealing with an extinction burst, should the behaviors get worse.

Functional Behavior Assessment (FBA)

National Professional Development Center on Autism Spectrum Disorders

Functional Behavior Assessment (FBA) is a systematic set of strategies that is used to determine the underlying function or purpose of a behavior, so that an effective intervention plan can be developed. FBA consists of describing the interfering or problem behavior, identifying antecedent or consequent events that control the behavior, developing a hypothesis of the behavior, and testing the hypothesis. Data collection is an important part of the FBA process. Often, teachers/practitioners use Functional Communication Training (FCT), Differential Reinforcement, Response Interruption/Redirection, Extinction, and Stimulus Control/Environmental Modification to address these behaviors in learners with ASD.

With what ages is FBA effective?

According to the evidence-based studies, learners with ASD ranged in age from 3 to 15 years with the majority of studies showing the effectiveness of functional behavior assessment with elementary age learners.

What skills or intervention goals can be addressed by FBA?

FBA targets skills in the domains of behavior and communication, usually with a focus of decreasing inappropriate behavior and teaching or increasing appropriate communicative alternatives. The studies in the evidence base targeted behaviors described as severe, stereotypical, disruptive, escape-motivated, rejecting, and leading. Replacement skills included more appropriate forms of communication such as signing, pointing, talking, and the use of alternative and augmentative communication (AAC) devices.

In what settings can FBA be effectively used?

In the evidence base, functional behavior assessment procedures were implemented in a variety of home, school, and community settings.

Functional Communication Training (FCT)

National Professional Development Center on Autism Spectrum Disorders

Functional Communication Training (FCT) emerged from the literature on Functional Behavioral Assessment (FBA) as a systematic practice to replace inappropriate behavior or subtle communicative acts with more appropriate and effective communicative behaviors or skills. FCT is always implemented after an FBA has been conducted to identify the function of an interfering behavior. When using FCT, teachers/practitioners analyze the interfering behavior to determine what the learner is trying to communicate. For example, is the learner biting peers when she wants a toy that another child has? Or is the learner yelling out in class so that he will be sent out of the room? After teachers/practitioners have identified the function of the interfering behavior, they then implement FCT to identify and teach a replacement behavior that is easy for the learner to use and serves the same purpose as the interfering behavior, but in a more appropriate way.

With what ages is FCT effective?

FCT can be used effectively with children with ASD, regardless of cognitive level and/or expressive communicative abilities. The evidence base shows that FCT is an effective intervention for learners at the early childhood and elementary levels. It is reasonable to assume that it would be an effective practice for older learners as well.

What skills or intervention goals can be addressed by FCT?

FCT targets skills that help children and youth with ASD effectively communicate with others in a variety of situations and settings. In the evidence base, FCT was used to decrease the incidence of interfering behaviors and to replace subtle, less-clear communicative forms (e.g., leading an adult by the hand to a desired item) with clearer communicative forms (e.g., pointing).

In what settings can FCT be effectively used?

The evidence-based studies were conducted in clinical, school-based, and home environments. While the research did not demonstrate use of FCT in community settings, it might be ideal for teaching to occur in community settings if interfering behaviors regularly occur there. Teaching in varied and/or more natural environments has been demonstrated to promote generalization of skills.

Naturalistic Intervention

National Professional Development Center on Autism Spectrum Disorders

Naturalistic Intervention is a collection of practices including environmental arrangement, interaction techniques, and strategies based on applied behavior analysis principles. These practices are designed to encourage specific target behaviors based on learners' interests by building more complex skills that are naturally reinforcing and appropriate to the interaction.

With what ages is Naturalistic Intervention effective?
Naturalistic Intervention can be used effectively with learners with ASD regardless of cognitive level and/or expressive language skills. The evidence base shows that Naturalistic Intervention is effective for learners at the preschool, elementary school, and middle/high school levels.

What skills or intervention goals can be addressed by Naturalistic Intervention?
The evidence base demonstrates that Naturalistic Intervention can be used to facilitate communication and social skills, which may include things like expressive vocabulary, speech intelligibility, use of gesture, shared attention, and turn-taking.

In what settings can Naturalistic Intervention be effectively used?
By definition, Naturalistic Intervention relies on materials and an environment that is reflective of the learner's interests and natural environment. It may be used in school, home, or community settings.

Parent-Implemented Intervention

National Professional Development Center on Autism Spectrum Disorders

Parent-Implemented Intervention entails parents directly using individualized intervention practices with their child to increase positive learning opportunities and acquisition of important skills. Parents learn to implement such practices in their home and/or community through a structured parent training program.

With what ages is Parent-Implemented Intervention effective?
Within the evidence-base, studies included learners as young as 2 and as old as 9 years of age.

What target behaviors or skills are appropriate for Parent-Implemented Intervention?
In the evidence base, Parent-Implemented Intervention increased the following skills in the area of communication: social communication skills, conversation skills, spontaneous language, use of augmentative and alternative communication, joint attention, and interaction in play. In the area of behavior, the following skills were improved: compliance, reduction of aggression, increased eating, and reduction of disruptive behaviors.

In what settings has Parent-Implemented Intervention been effectively used?
In the evidence base, parents have implemented intervention with their children with autism effectively in the home environment.

Peer-Mediated Instruction and Intervention

National Professional Development Center on Autism Spectrum Disorders

Peer-Mediated Instruction (PMII) is used to teach typically developing peers ways to interact with and help learners with ASD acquire new social skills by increasing social opportunities within natural environments. With PMII, peers are systematically taught ways of engaging learners with ASD in social interactions in both teacher-directed and learner-initiated activities (English et al., 1997; Odom et al., 1999; Strain & Odom, 1986).

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With what ages is PMII effective?

PMII can be implemented with pairs or small groups of learners across the age range. With young children (i.e., 3 to 8 years of age), practitioners can use peer-initiation training to help learners with ASD acquire communication/language and social skills. Social networking strategies are more appropriate for older learners (i.e., 9 to 18 years of age). PMII has been shown to have positive effects on academic, interpersonal, and personal-social development, and may be the largest and most empirically supported type of social intervention for learners with ASD (Bass & Mulick, 2007; Maheady, Harper, & Mallette, 2001; McConnell, 2002).

What skills or intervention goals can be addressed by PMII?

PMII targets social skills that include the following: responding to others, reciprocity, understanding others, and interacting with others or in groups.

In what settings can PMII be effectively used?

PMII has been used effectively in clinical and school-based settings across preschool to high school age groups. PMII is intended to be used as part of the daily curriculum through a balance of teacher-directed and learner-initiated interactions and activities.

Picture Exchange

National Professional Development Center on Autism Spectrum Disorders

The Picture Exchange Communication System (PECS) was developed at the Delaware Autistic Program (DAP) and was designed to teach young children to communicate in a social context (Bondy & Frost, 1994; Frost & Bondy, 2002). Using PECS, learners are taught to give a picture of a desired item to a communicative partner in exchange for the item. There are six phases of PECS instruction, with each phase building on the last. The phases are: (1) Teaching the physically assisted exchange, (2) Expanding spontaneity, (3) Simultaneous discrimination of pictures, (4) Building sentence structure, (5) Responding to, "What do you want?" and (6) Commenting in response to a question.

With what ages is PECS effective?
In the five studies documenting the evidence base for PECS, the youngest child was three years of age, and the oldest was twelve years old.

What skills or intervention goals can be addressed by PECS?
In the evidence-base, communication, social, and behavior skills were the primary targets for intervention.

In what settings can PECS be effectively used?
The research evidence suggests that PECS can be used in multiple settings, including schools, homes, and therapy settings.

Pivotal Response Training (PRT)

National Professional Development Center on Autism Spectrum Disorders

Pivotal Response Training (PRT) is a method of systematically applying the scientific principles of applied behavior analysis (ABA) to teach learners with Autism Spectrum Disorders (ASD). PRT builds on learner initiative and interests, and is particularly effective for developing communication, language, play, and social behaviors. PRT was developed to create a more efficient and effective intervention by enhancing four pivotal learning variables: motivation, responding to multiple cues, self-management, and self-initiations. According to theory, these skills are pivotal because they are the foundational skills upon which learners with ASD can make widespread and generalized improvements in many other areas.

With what ages is PRT effective?

According to the studies that form the evidence base for PRT, children from 2 to 16 years of age have benefitted from PRT intervention. Research has shown that the use of motivational techniques inside PRT's teaching framework can lead to 85-90% of children with autism, who begin intervention before the age of 5, developing verbal communication as a primary mode of communication. More recently, though, researchers have identified specific behavioral characteristics associated with favorable responses to the teaching practices. Precursors related to positive outcomes thus far, include increased use of social initiations, less social avoidance, more toy play, and stereotypic language.

What skills or intervention goals can be addressed with PRT?

The focus of PRT is to teach children and youth with ASD certain **pivotal behaviors** through a set of specific training procedures, which, when learned, will lead to the development of new behaviors. The pivotal behaviors targeted in PRT are: motivation, responding to multiple cues, self-management, and self-initiations. By acquiring these behaviors children can learn skills in the areas of academics, social, language/communication, and self management. Improvements in these areas will promote a variety of social-communicative behaviors, such as communication, imitation, play skills, joint attention, and will reduce inappropriate, maladaptive behaviors.

In what settings can PRT be effectively used?

The ultimate goal of PRT is to provide learners with autism with the social and educational skills to participate independently in enriched and meaningful lives in inclusive settings. PRT emphasizes the importance of training parents as primary intervention agents; however, other family members (e.g., siblings, secondary caregiver), staff (e.g., teachers, school personnel, consultants), and typically developing peers are also included as intervention agents. As a result, PRT has been successfully implemented in a variety of naturalistic settings, including school, home, and community. Further, teaching in varied and more naturalistic environments has been demonstrated to promote generalization of skills.

Prompting

National Professional Development Center on Autism Spectrum Disorders

Prompting procedures include any help given to learners that assist them in using a specific skill. These procedures are often used in conjunction with other evidence-based practices including Time Delay and Reinforcement. Prompts are generally given by an adult or peer *before* or *as* a learner attempts to use a skill. A variety of prompting procedures support the learning and development of children and youth with autism spectrum disorders (ASD). They include:

1. *Least-to-most prompts*
2. *Simultaneous prompting*
3. *Graduated guidance*

With these procedures, teachers and other practitioners use different types of prompts in a systematic fashion to help learners with ASD acquire target skills. Prompts generally fall into one of the following categories:

1. *Verbal prompts*: Teachers/practitioners make statements that help learners with ASD
2. *Gestural prompts*: Teachers/practitioners make movements that cue learners
3. *Model prompts*: Teachers/practitioners perform the target skill or behavior
4. *Physical prompts*: Teachers/practitioners touch learners to help them use the target behavior or skill
5. *Visual prompts*: Teachers/practitioners provide pictures of events that provide learners with information about how to use the target skill or behavior

With what ages is Prompting effective?
Prompting can be used effectively with children and youth with ASD, regardless of cognitive level and/or expressive communicative abilities across the age range. The evidence base shows that prompting is an effective intervention for learners with ASD ranging from 3 to 22 years of age.

What skills or intervention goals can be addressed with Prompting?
Prompting can be used to teach a variety of skills including seeking information, pointing to objects, identifying numbers/objects, and remaining in "on-task" behavior.

In what settings can Prompting be effectively used?
The evidence-based studies were conducted mainly in clinic-based settings or in one-to-one teaching sessions with learners with ASD. The research did not demonstrate the use of prompting in more naturalistic settings such as during ongoing classroom routines and activities, in the home, or in community-based settings; however, each of the prompting procedures could be adapted for use in these settings.

Reinforcement

National Professional Development Center on Autism Spectrum Disorders

Reinforcement describes a relationship between the learners behavior and a consequence that follows the behavior. This relationship is only considered reinforcement if the consequence increases the probability that a behavior will occur in the future, or at least be maintained. For example, children learn to ask for something politely if they want to receive it in return. The ultimate goal of reinforcement is to help learners with ASD learn new skills and maintain their use over time in a variety of settings with many different individuals. As such, teachers and other practitioners must identify the appropriate reinforcers that motivate individual learners with ASD. Reinforcement is a fundamental practice that is almost always used with other evidence-based practices such as Prompting, Time Delay, Functional Communication Training, and Differential Reinforcement of other behaviors. As a practice, reinforcement is either positive or negative.

Positive reinforcement refers to the presentation of a reinforcer after a learner uses a target skill/behavior. Positive reinforcement is generally the strategy that teachers/practitioners use first when trying to teach new skills (e.g., teaching a replacement behavior for an interfering behavior) or to increase appropriate behaviors. A token economy program is another type of positive reinforcement strategy that can be used effectively with learners with ASD.
Negative reinforcement refers to the removal of an object or activity the learner with ASD finds aversive such as washing tables or staying seated. When the learner with ASD uses the identified target skill/behavior (e.g., requesting a break, raising hand, taking a bite of food), the aversive object or activity is removed.

With what ages is Reinforcement effective?
Reinforcement can be used effectively with children and youth with ASD, regardless of cognitive level and/or expressive communicative abilities. The evidence base shows that reinforcement is an effective practice that can be used with learners with ASD ranging from 3 to 22 years of age.

What skills or intervention goals can be addressed with Reinforcement?
Reinforcement can be used to teach a variety of skills such as learning toilet training, expanding speech production, decreasing interfering behaviors (e.g., drooling, disruptive), increasing on-task behavior, and increasing physical activity.

In what settings can Reinforcement be effectively used?
The evidence-based studies were conducted mainly in clinic-based settings or in one-to-one teaching sessions with learners with ASD. Research did not demonstrate the use of reinforcement in more naturalistic settings such as during ongoing classroom routines and activities in homes or in community-based settings, however, it might be effectively used in these settings as well.

Response Interruption/Redirection (RIR)

National Professional Development Center on Autism Spectrum Disorders

Response Interruption/Redirection (RIR) is an evidence-based practice used to decrease interfering behaviors, predominantly those that are repetitive, stereotypical, and/or self-injurious. RIR often is implemented after a functional behavior assessment (FBA) has been conducted to identify the function of the interfering behavior. RIR is particularly useful with persistent interfering behaviors that occur in the absence of other people, in a number of different settings, and during a variety of tasks. These behaviors often are not maintained by attention or escape. Instead, they are more likely maintained by sensory reinforcement and are often resistant to intervention attempts. RIR is particularly effective with sensory-maintained behaviors because teachers/practitioners interrupt learners from engaging in interfering behaviors and redirect them to more appropriate, alternative behaviors.

With what ages is Response Interruption/Redirection effective?
According to the evidence-based studies, learners with ASD ranged in age from 3 to 21 years with the majority of studies showing the effectiveness of RIR with elementary, middle school, and high school-aged learners.

What skills or intervention goals can be addressed by Response Interruption/Redirection?
RIR is most often used with learners with ASD who exhibit severe interfering behaviors, particularly those that are repetitive and stereotypical in nature. The studies in the evidence base targeted off-task behavior, as well as sustained engagement in vocal stereotypy and repetitive behaviors. Prompting and reinforcement also were used by researchers to teach more appropriate behaviors to take the place of the interfering behaviors displayed by learners with ASD.

In what settings can Response Interruption/Redirection be effectively used?
The evidence-based studies were conducted mainly in clinic-based settings or in one-to-one teaching sessions with learners with ASD. Although the research did not demonstrate the use of RIR in more naturalistic settings (e.g., during ongoing classroom routines and activities, in the home, in community-based settings), it might be effectively used in these settings as well.

Self-Management

National Professional Development Center on Autism Spectrum Disorders

Self-management interventions help learners with autism spectrum disorders (ASD) learn to independently regulate their own behaviors and act appropriately in a variety of home, school, and community-based situations. With these interventions, learners with ASD are taught to discriminate between appropriate and inappropriate behaviors, accurately monitor and record their own behaviors, and reward themselves for behaving appropriately. As learners with ASD become more fluent with the self-management system, some of the implementation responsibilities shift from teachers, families, and other practitioners to the learners themselves.

With what ages is Self-Management effective?
Self-Management interventions can be used across the age range starting in early childhood through high school to help learners with ASD acquire key skills needed to interact with others, initiate and maintain conversations, develop self-help skills, and reduce interfering behaviors (e.g., stereotypic, disruptive behaviors).

What skills or intervention goals can be addressed by Self-Management?
Self-Management interventions can be used to reduce inappropriate and interfering behaviors (disruptive behaviors, not completing school work and chores independently and efficiently, etc.) and to increase social, adaptive, and language/communication skills. Specific skills that were the focus of interventions in the evidence-based studies include giving compliments to others, responding to others, sharing, increasing on-task behavior, initiating interactions, reducing the occurrence of interfering behaviors, promoting daily living skills, increasing play skills, and conversing with others.

In what settings can Self-Management be effectively used?
Self-Management interventions have been used effectively in clinical and school-based settings across preschool and high school age groups.

Social Narratives

National Professional Development Center on Autism Spectrum Disorders

Social Narratives are interventions that describe social situations in some detail by highlighting relevant cues and offering examples of appropriate responding. They are aimed at helping learners adjust to changes in routine and adapt their behaviors based on the social and physical cues of a situation, or to teach specific social skills or behaviors. Social narratives are individualized according to learner needs and typically are quite short, perhaps including pictures or other visual aids. Sentence types that are often used when constructing social narratives include descriptive, directive, perspective, affirmative, control, and cooperative. Refer to the work of Gray (1993; 1995) for specific instructions on creating effective social stories.

With what ages are Social Narratives effective?

The evidence-based research suggests that Social Narratives can be used effectively with learners with ASD. In the evidence base, children and youth ranging in age from early childhood to middle school who were identified as having ASD, autism, PDD-NOS, and Asperger's served as participants.

What skills or intervention goals can be addressed by Social Narratives?

Social Narratives originated in the behavioral literature and have been used to (1) address behavioral difficulties, (2) teach social skills, and (3) promote effective and appropriate communication. In the evidence base, studies targeted the following skills or behaviors: repetitive behavior, social interactions, disruptive behavior, generalization of independent behavior, expression of frustration, choice-making and play, and on-task behavior.

In what settings have Social Narratives been effectively used?

Social Narratives are designed to be used as a pre-cursor to, or in anticipation of, upcoming events. As such, they are portable and adaptable to nearly any setting. In the evidence base, the majority of the studies were conducted in school settings (including classrooms, therapy rooms, bathrooms, lunchrooms, and hallways). One study was conducted in a home setting while another study implemented a social narrative intervention in both school and community settings.

Social Skills Groups

National Professional Development Center on Autism Spectrum Disorders

Social Skills Groups are used to teach individuals with Autism Spectrum Disorders (ASD) ways to appropriately interact with typically developing peers. Social Skills Groups typically involve small groups of two to eight individuals with disabilities and a teacher or adult facilitator. Most social skill group meetings include instruction, role-playing or practice, and feedback to help learners with ASD acquire and practice skills to promote positive social interactions with peers.

With what ages are Social Skills Groups effective?

Within the evidence-base, studies included learners as young as 4 and as old as 12 years of age. Thus, Social Skills Groups have the potential to be an effective practice with all learners. Research also exists that supports its use with adult learners.

What skills or intervention goals can be addressed with Social Skills Groups?

In the evidence base, Social Skills Group training targeted the following: perspective-taking, conversation skills, friendship skills, problem-solving, social competence, emotion recognition, theory of mind, and problem-solving. In addition, specific interaction skills such as initiation, responding, maintaining, greeting, giving/accepting compliments, turn taking, sharing, asking for help, offering help, and including others were also improved through the use of social skills groups.

In what settings can Social Skills Groups be effectively used?

In the evidence base, training took place in a variety of school and clinic settings and included both inclusive and non-inclusive settings.

Speech Generating Devices

National Professional Development Center on Autism Spectrum Disorders

Speech Generating Devices (SGD) are electronic devices that are portable in nature and can produce either synthetic or digital speech for the user. SGD may be used with graphic symbols, as well as with alphabet keys.

With what ages is SGD effective?

SGD can be used effectively with children and youth with ASD who have limited or no verbal speech from early childhood through high school. The evidence base indicates that SGD are effective with learners ranging from 3 to 20 years of age.

What skills or intervention goals can be addressed by SGD?

SGD target skills that help children and youth with ASD effectively communicate with others in a variety of situations and settings. The evidence base suggests that within the communication domain, a variety of skills can be targeted for intervention, including initiation, expressive language (verbal), joint attention/gestures (non-verbal), and pragmatics (conversation skills). The research also demonstrates that reading and math skills can be addressed using SGD.

In what settings can SGD be effectively used?

The evidence-based research studies were conducted in clinical or school settings. Although there is little evidence for this practice being implemented at home, application of SGD in this setting seems logical.

Structured Work Systems

National Professional Development Center on Autism Spectrum Disorders

Structured Work Systems are an element of structured teaching developed by Division TEACCH (**T**reatment and **E**ducation of **A**utistic and related **C**ommunication handicapped **CH**ildren). Structured teaching, as defined by Division TEACCH, is an instructional strategy that emphasizes visual supports. Its aims are to increase and maximize independent functioning and reduce the frequent need for teacher correction and reprimand (Schopler, Mesibov, & Hearsey, 1995). The individual work system is defined as a visually organized space where learners independently practice skills that have been previously mastered under the direct supervision of an adult. A work system visually communicates at least four pieces of information to the learner:

- The tasks the learner is supposed to do
- How much work there is to be completed
- How the learner knows he/she is finished (progress towards goal)
- What to do when he/she is finished

With what ages are Structured Work Systems effective?
Structured Work Systems can be implemented with individuals across the age range, beginning in preschool and extending through high school and into employment settings. With early childhood and elementary-aged students, work systems are an effective component of classroom or home programming that increase independent performance across a number of curriculum areas, including academic and play skills (Hume & Odom, 2007; Ozonoff & Cathcart, 1998). In older learners with ASD, work systems have been effective in increasing on-task performance and task completion in after-school activities and job skills (Hume & Odom, 2007; MacDuff, Krantz, & McClannahan, 1993).

What skills or intervention goals can be addressed by Structured Work Systems?
Structured Work Systems target adaptive behavior skills including on-task behavior, task completion, transitions between tasks, increasing response chain length, and independent performance across curriculum area (e.g. play skills, self-help skills, academic skills).

In what settings can Structured Work Systems be effectively used?
Structured Work Systems have been used effectively in classroom settings, home settings, group home settings, and in one employment setting. Structured work systems are intended to be used as one component of comprehensive programming for individuals with ASD.

Task Analysis

National Professional Development Center on Autism Spectrum Disorders

Task Analysis is the process of breaking a skill into smaller, more manageable steps in order to teach the skill. Other practices, such as Reinforcement, Video modeling, or Time Delay, should be used to facilitate learning of the smaller steps. As the smaller steps are mastered, the learner becomes more and more independent in his/her ability to perform the larger skill.

With what ages is Task Analysis effective?

Task Analysis can be used effectively with children with ASD, regardless of cognitive level and/or expressive communicative abilities. The evidence base shows that Task Analysis is an effective intervention for learners at the preschool (1 study), elementary and middle school levels (6 studies), and high school (1 study). It is reasonable to assume that it would be an effective practice for older learners as well. Task Analysis can also be used to train professionals on how to interact with and/or teach their students with ASD.

What skills or intervention goals can be addressed by Task Analysis?

The research that constitutes the evidence base demonstrates that Task Analysis can be used to address issues in the academic, behavior, communication, and social domain. Any skill that can be broken down into smaller steps for teaching is an appropriate target for task analysis.

In what settings can Task Analysis be effectively used?

Task Analysis can be used in school, home, or community settings. Generalization of skills is most likely when teaching occurs in multiple settings.

Time Delay

National Professional Development Center on Autism Spectrum Disorders

Time Delay is a practice that focuses on fading the use of prompts during instructional activities. This practice is always used in conjunction with prompting procedures such as least-to-most prompting, simultaneous prompting, and graduated guidance. With this procedure, a brief delay is provided between the initial instruction and any additional instructions or prompts. The evidence-based research focuses on two types of time delay procedures: progressive and constant. With *progressive time delay*, teachers and other practitioners gradually increase the waiting time between an instruction and any prompts that might be used to elicit a response from a learner with ASD. For example, a teacher provides a prompt immediately after an instruction when a learner with ASD is initially learning a skill. As the learner becomes more proficient at using the skill, the teacher gradually increases the waiting time between the instruction and the prompt. Similar to progressive time delay, with *constant time delay*, there is no delay between the instruction and prompt when a learner is first learning a skill. However, with constant time delay, a fixed amount of time is always used between the instruction and the prompt as the learner becomes more proficient at using the new skill.

With what ages is Time Delay effective?

Time Delay can be used effectively with children and youth with ASD, regardless of cognitive level and/or expressive communicative abilities. The evidence base shows that Time Delay is an effective intervention for learners with ASD ranging from 6 to 11 years of age.

What skills or intervention goals can be addressed by Time Delay?

Time Delay can be used to teach a variety of skills including academic, play/leisure, language/communication, and social skills.

In what settings can Time Delay be effectively used?

The evidence-based studies were conducted in clinical environments. While the research did not demonstrate use of Time Delay in the home, school, or community-based settings, it might be ideal for teaching to occur in these contexts as well to promote generalization of skills.

Video Modeling

National Professional Development Center on Autism Spectrum Disorders

Video Modeling is a mode of teaching that uses video recording and display equipment to provide a visual model of the targeted behavior or skill. Types of video modeling include basic video modeling, video self-modeling, point-of-view video modeling, and video prompting. *Basic video modeling* involves recording someone besides the learner engaging in the target behavior or skill (i.e., models). The video is then viewed by the learner at a later time. *Video self-modeling* is used to record the learner displaying the target skill or behavior and is reviewed later. *Point-of-view video modeling* is when the target behavior or skill is recorded from the perspective of the learner. *Video prompting* involves breaking the behavior skill into steps and recording each step with incorporated pauses during which the learner may attempt the step before viewing subsequent steps. Video prompting may be done with either the learner or someone else acting as a model.

With what ages is Video Modeling effective?

The evidence-based research suggests that Video Modeling can be effectively implemented with learners from early childhood through middle school. This practice may prove useful with high school age learners as well, though no studies were identified to support its use at this age level.

What skills or intervention goals can be addressed by Video Modeling?

In the evidence-based studies, the domains of communication, social, academic/cognition, and play were represented. It may be useful in the behavior domain as well; however, no studies were identified to support the use of video modeling in this domain.

In what settings can Video Modeling be effectively used?

In the studies that serve as the foundation for the evidence base, Video Modeling was implemented in home and school settings. This practice, however, may be useful anywhere there is learner access to viewing equipment.

Visual Supports

National Professional Development Center on Autism Spectrum Disorders

Visual Supports are any tool presented visually that supports an individual as he or she moves through the day. Visual supports might include, but are not limited to, pictures, written words, objects within the environment, arrangement of the environment or visual boundaries, schedules, maps, labels, organization systems, timelines, and scripts. They are used across settings to support individuals with ASD (National Research Council, 2001).

With what ages are Visual Supports effective?

Visual Supports can be implemented with individuals across the age range, beginning in preschool and extending through middle school age. Effective Visual Supports in early childhood settings include visual schedules to increase task engagement, visual scripts to encourage social interaction, and picture cues to support play skill development (Krantz & McClannahan, 1998; Massey & Wheeler, 2000; Morrison, Sainato, BenChaaban, & Endo, 2002). In elementary and middle school, Visual Supports such as schedules and picture cues have proven effective in reducing transition time, increasing on-task behavior, and in completing self-help in the home (Bryan & Gast, 2000; Dettmer, Simpson, Myles, & Ganz, 2000; MacDuff, Krantz, & McClannahan, 1993).

What skills or intervention goals can be addressed by Visual Supports?

Visual Supports target a number of adaptive behavior skills, including task engagement, independent performance, transitions across activities, and increasing response chain length. Visual supports have also proven effective in increasing skills across curriculum areas, including the demonstration of play skills, social interaction skills, and social initiation. In addition, Visual Supports have been beneficial in reducing self-injurious behavior.

In what settings can Visual Supports be effectively used?

Visual Supports have been used effectively in classroom settings and home settings. Visual Supports are intended to be used as one component of comprehensive programming for individuals with ASD.

VII.

IDEA and Your Child's IEP

Inclusion Education

IDEA Educational Mandates

www.autism-society.org

There are several federal laws that protect individuals with autism and their families by ensuring that students on the spectrum have Individualized Education Plans (IEPs) that are tailored to their specific needs.

Individuals with Disabilities Education Act (IDEA)

To understand your student's rights in America's public schools, it helps to start with one of the primary laws governing the education of students with disabilities: the Individuals with Disabilities Education Improvement Act of 2004 (P.L. 108-446). IDEA is the federal law that guarantees a free and appropriate public education (FAPE) in the least restrictive environment (LRE) for every person with a disability. This means that if you enroll your student in public school, his/her education should be at no cost to you and should be appropriate for his/her age, ability and developmental level. IDEA is an amended version of the Education for All Handicapped Children Act (P.L. 94-142), passed in 1975. In 2004, IDEA was reauthorized (P.L. 108-446), further defining children's rights to educational services and strengthening the role of parents in the educational planning process for their children.

Keep in mind that IDEA establishes that an appropriate educational program must be provided, not necessarily an "ideal" program or the one you feel is best for your student. The law specifies that educational placement should be determined individually for each person, based on their specific needs, not solely on the diagnosis or category. No one program or amount of services is appropriate for all individuals with disabilities. It is important that you work with the school to obtain the educational support and services that your student needs.

Given the rights your student has to educational services, you must keep in mind that IDEA establishes the minimum requirements schools must provide. For states to receive federal funds, they must meet the eligibility funding criteria of IDEA. States may exceed the requirements and provide more services. They cannot, however, provide fewer services or have state regulations or practices that contradict the guidelines of IDEA.

IDEA has six principles that provide the framework around which special education services are designed and provided to students with disabilities. These principles include:

- Free and Appropriate Education (FAPE)
- Appropriate Education
- Individualized Education Program (IEP)
- Least Restrictive Environment (LRE)
- Parent and Student Participation in Decision Making
- Procedural Safeguards

Individualized Education Plan (IEP)

www.autism-society.org

The Individualized Education Plan (IEP) is a written document that outlines a child's education. As the name implies, the educational program should be tailored to the individual student to provide maximum educational benefit. The key word is individual. A program that is appropriate for one child with autism may not be appropriate for another.

The IEP is the cornerstone for the education of a child with a disability. It should identify the services a child needs so that he/she may grow and learn during the school year. It is also a legal document that outlines:

- The child's special education plan by defining goals for the school year
- Services needed to help the child meet those goals
- A method of evaluating the student's progress

The objectives, goals, and selected services are not just a collection of ideas on how the school may educate a child; the school district must educate your child in accordance with the IEP.

To develop an IEP, the local education agency officials and others involved in the child's educational program meet to discuss education-related goals. By law, the following people must be invited to attend the IEP meeting:

- One or both of the child's parents
- The child's teacher or prospective teacher
- A representative of the public agency (local education agency), other than the child's teacher, who is qualified to provide or supervise the provision of special education
- The child, if appropriate
- Other individuals at the discretion of the parent or agency (such as a physician, advocate, or neighbor)

With the 2004 Reauthorization of the Individuals with Disabilities Education Improvement Act, or IDEA (P.L. 108-446), parents now must be included as "members of any group that makes decisions on the educational placement of the child." IEP meetings must be held at least annually, but may be held more often if needed. Parents may request a review or revision of the IEP at any time. While teachers and school personnel may come prepared for the meeting with an outline of goals and objectives, the IEP is not complete until it has been thoroughly discussed and all parties agree to the written document.

Parents are entitled to participate in the IEP meeting as equal participants with suggestions and opinions regarding their child's education. They may bring a list of suggested goals and objectives as well as additional information that may be pertinent to the IEP meeting.

Inclusion Education

by Alan Harchik, Ph.D., BCBA-D
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Inclusion is a popular approach for educating children with disabilities such as autism. Inclusion is another term for "mainstreaming," or merging special education with regular education classes. The goal of inclusion is for all children with disabilities to attend "typical" schools and classrooms and receive the support they need to be successful.

The approach has a lot of appeal. It gives children with special needs the opportunity to learn in natural, stimulating environments. Inclusion makes it possible for friendships to occur with non-handicapped peers, provides positive role models, and may lead to greater acceptance in the community. In addition, children without disabilities may benefit by learning about differences between people and by having the opportunity to assist others. Teachers may benefit by achieving a broader appreciation of differences and by learning new techniques for instruction.

The approach is also in line with state and federal requirements for a child to be educated in what is called the "least restrictive environment." Finally, inclusion combats a long history of segregation in the field of special education and disabilities. For decades, people with disabilities did not have access to public schools, facilities, housing, and healthcare.

Many children have benefited from being included in their public schools.

What should parents do when considering different options for their child? First, inclusion should be considered on a case-by-case basis. Parents need to consider the needs of their own child, the capacity of the school to meet these needs, and their own preferences.

Parents should find out whether the program they are considering – be it an inclusion or special setting model – includes these components:

- a language-based curriculum
- a curriculum that progresses in an orderly manner throughout the day and addresses multiple skill development
- effective instructional techniques based upon research, including a strong focus on positive reinforcement, shaping, prompting, and fading of prompts
- frequent opportunities for the child to respond to instruction
- little time when the child is not engaged in instruction
- daily recording of academic work and behavior problems
- frequent review of progress and timely changes in procedures if progress is not occurring.

VII.

Other Related Resources & Information

Hyperlexia

www.hyperlexia.org

Hyperlexia is the ability to decode written words at a higher level than expected given one's intellectual abilities. The term hyperlexia was coined in 1967 by the Silberbergs. However, Bonner was the first to document the descriptions of a child with hperlexia in 1917. In 1943, Kanner's study also documented children with autism who had good reading abilities and memory for words.

There are five common characteristics of hyperlexia.

1. It occurs in the developmentally disabled population
2. Is usually expressed before the age of 5
3. People teach themselves how to decode words
4. Reading is also ritualistic and compulsive
5. Their ability to read words is at a much higher level than the person's intellectual abilities

Children with hyperlexia are usually first described as "different." They typically do not show interest in toddler activities and have difficulty forming relationships with others. They initially focus on letters and then move on to the whole words. Children with hyperlexia may also have difficulties with conversational speech. Other common attributes associated with hyperlexia include:

1. echolalia
2. pronoun reversals
3. idiosyncratic use of words or phrases
4. delays in using single words

There is no known cause at this time for hyperlexia. To assess if hyperlexia is present, tests must focus on visual processes rather than on verbal ones. Intensive speech and language therapy and early intervention programs can help to develop language and comprehension skills.

Echolalia

Echolalia is repeating or echoing of a verbal utterance made by another person. 75% of individuals with autism who are verbal demonstrate one or both forms of echolalia. One type is immediate *echolalia* in which the person says a word or phrase immediately after hearing it. It involves short-term memory. The other type is *delayed echolalia* in which the person says what was heard after a delay or lapse of time. For example, the person may repeat a line of a movie that s/he heard the day before.

Many consider echolalia to be an encouraging sign in the language development of a person with autism. Echolalia is a normal part of acquiring language. Professionals should attempt to replace the echolalia with a way to fulfill its function rather than try to eliminate it. Overtime, echolalia can be overcome with methods that meet the echolalia's function. For example, if the person repeats questions that are asked of him or her, then it may be appropriate to teach the person the phrase "I don't know;" if the function of the echolalia is to deal with uncertainty during conversations. Another possible method is the "Cues-Pause-Point" technique in which a pause, or break, is built into conversations to permit the person time to think of a response.

RESOURCES

WEBSITES:

- http://groups.msn.com/TheAutismHomePage/echolaliafacts.msnw
- www.iidc.indiana.edu

BOOK:

- Wetherby, A. & Prizant, B. (2000). Autism Spectrum Disorders: A Transactional Developmental Perspective. Baltimore: Paul H. Brookes Publishing Co.

Savants

Individuals with autism who have savant skills are described as having an extraordinary, special ability despite their communication, social, and behavior difficulties. There are 3 types of savant abilities. "Splinter skills" involve memorization of a specific item or fact such as license plates or sports trivia. "Talented savants" are more specialized skills and abilities such as computing algebraic problems or playing a musical instrument well. "Prodigious savants" have extremely specialized skills that would be remarkable even if a person without a disability performed them. An example of a prodigious savant is computing square roots in one's head by the age of 8.

To date, there is no generally accepted answer as to how these individuals can perform their skills and abilities. 10% of individuals with autism demonstrate a type of savant abilities while only 1% of the non-autistic population (including people with mental impairments) does. It occurs in males more than females with a ratio of 6 to 1.

Individuals with savant skills should be encouraged to develop their specialized ability to facilitate language acquisition, socialization with others, independence, and future employment opportunities. However, a balanced approach that includes such things as social skills training, counseling, other areas of interest, and speech therapy can help to encourage the savant skills yet not permit them to dominate the person's life.

RESOURCES

WEBSITES:
http://www.wisconsinmedicalsociety.org/savant/default.cfm

Theory of Mind

To interact successfully with others, one must consider different viewpoints or theories of mind. Some individuals with autism typically lack social skills causing them to withdraw from interactions with others or display inappropriate behaviors during social situations. As a result of such "anti-social" behavior, they are commonly labeled as self-centered or uncaring. Supporters of the notion "Theory of Mind" would argue otherwise.

A theory of mind encompasses the ability to understand the thoughts, feelings, and emotions of others. Each person has unique plans, thoughts, and perspectives. Thus, individuals with autism may lack a theory of mind by perceiving that their own feelings are the same as others. Individuals with autism may also not understand social meaning, not show empathy, or not be able to take others' perspectives which all would be indicative of a lack of theory of mind.

Tasks have been developed to enhance individuals' theory of mind. These tasks have been used as a treatment approach to help individuals overcome their difficulties with social situations by emphasizing perspective taking abilities.

Theory of mind tasks include role-playing, perspective taking scenarios and questions, and one-on-one conversations. These theory of mind tasks have a positive effect on pragmatic skills, or the use of language. However, research has not demonstrated if the individual clearly understands the concepts presented in the task or if the ability to understand or express appropriate feelings improves.

RESOURCES

WEBSITE:

- www.autism.org

Anxiety and Depression

National Professional Development Center on Autism Spectrum Disorders

Mood dysregulation and anxiety symptoms can be easily missed in children with ASD. On the other hand, a high-functioning teenager with undiagnosed ASD may only come to someone's attention specifically because of symptoms of depression or anxiety.

Consider the following diagnostic challenges related to depression:

- A teenager who is increasingly isolated, avoiding his peers more often or in different ways, and spending excessive amounts of time focused on a specific topic of interest may have symptoms of depression secondary to an ASD diagnosis.
- In teens with ASD, classic symptoms of depression may sometimes be masked. Their ability to effectively communicate their emotional states may be limited. Therefore, mental health professionals may have to do some sleuthing to determine if behaviors observed are congruent with ASD in isolation, or ASD paired with a mood disorder. School professionals who have the opportunity to observe the student in a wide variety of circumstances may provide the information essential to making the correct diagnosis.

Anxiety symptoms can also be misleading. Consider the following diagnostic challenges:

- A child who is anxious about speaking in public may not only have a common phobia (e.g., public speaking), but may also be masking a tic disorder (a common symptom in ASD) that could be exacerbated by the activity.
- For many students, school refusal is linked with anxiety-based disorders. However, the student with ASD may also avoid school because the school day is too strenuous due to the high demand for social interaction and need to control stereotypic or self-stimulatory behavior (e.g., some children develop enough self-control to stop themselves from engaging in repetitive motor mannerisms at school but are exhausted at the end of the day as a result).

Anxiety levels should be regularly evaluated for students with ASD to make certain they are receiving appropriate services.

Attention Deficit Hyperactivity Disorder

National Professional Development Center on Autism Spectrum Disorders

Children between the ages of 5-7 (or even younger) can be diagnosed with Attention Deficit Hyperactivity Disorder (ADHD). This disorder affects a child's ability to remain focused and to attend to tasks at hand. As noted previously, some children with ADHD may also be impulsive and explosive, and have extreme difficulties such as remaining seated or following simple classroom rules.

Consider the following diagnostic challenges:

- Children with ASD may have difficulty with attention and concentration. They may experience the same behavioral challenges as a child with ADHD. However, the *reason* for the behavior is different. A child with ADHD may lose focus because he is thinking about recess. In contrast, a child with ASD may lose focus because he is fixating on the color of the teacher's sweater or watching the fan rotate. In addition, students with ASD may not be able to concentrate because instructions are too complicated given their communication difficulties.
- A child with ADHD may engage in problem behaviors due to pent-up energy. In contrast, a child with ASD may act out behaviorally due to a sensory interest or repetitive motor or vocal tic symptom. The same behaviors occur in both children, but there may be very different causes or triggers. Carefully identifying the function or purpose of a behavior is often critical. The function of the behavior may influence both the diagnosis that is rendered and the treatment that is recommended.

Obsessive-Compulsive Disorder

National Professional Development Center on Autism Spectrum Disorders

Children with ASD often display stereotypic or self-stimulatory behaviors. That is, they ritualistically repeat the same set of behaviors. Based on simple observation, it is often difficult to distinguish the compulsive behavior of an individual with Obsessive-Compulsive Disorder (OCD) and the self-stimulatory behavior of an individual with ASD.

Consider the following diagnostic challenges:

- Children with ASD *and* children with OCD might line up their toys, categorize things, insist on sameness in their routines or rituals, or have strange rules that they create to govern their actions with others. However, the children with OCD often have anxiety-based thinking that is intimately linked to their behaviors. For instance, a child with OCD may feel compelled to line up all of her shoes facing north and according to color. Usually, there is a thought associated with the behavior, such as "I need to line my shoes up, so the house won't burn down while I am at school today." In contrast, the child with ASD might identify a preference for sameness or, more likely, will be incapable of articulating why he engages in these behaviors.
- Repetitive hand-washing may be a self-stimulatory behavior for a student on the autism spectrum *or* it may be associated with intrusive fears of contamination and disease for the child with OCD.

It may be particularly difficult to make the distinction between compulsive and self-stimulatory behaviors with children who lack strong communication skills. Making the appropriate differential diagnosis may be based on the child's ability to express whether or not intrusive thoughts and fears are present. Also, children with OCD often state that they wish they did not perform the compulsions. The appropriateness of specific medical treatments is clearly tied to the correct diagnosis.

Bipolar Disorder and Oppositional Defiant Disorder

National Professional Development Center on Autism Spectrum Disorders

The most confusing symptom we probably see in children with ASD is linked to behavioral outbursts. Many professionals who are not familiar with ASD assume a child's behavior is due to a mood disorder such as Bipolar Disorder, or a behaviorally driven diagnosis such as Oppositional Defiant Disorder (ODD). The true cause of the behavior can be quite different.

Consider the following diagnostic challenges:

- Children with bipolar disorder can be explosive, impulsive, and highly aggressive. Their symptoms are often cyclical and follow a pattern over time that can be tracked and monitored. However, most people do not regularly monitor these behaviors in a way that makes the pattern readily apparent.
- There is not typically an environmental stressor that is the primary trigger for the explosive, impulsive, and highly aggressive behavior for children with bipolar disorder. These behaviors are ruled by fluctuations of the chemicals in their brains that lead to (sometimes highly rapid) changes in their overall behavior. Although students with ASD may have these same symptoms, *their* problems are typically tied to environmental stressors. It may not be readily apparent, however, what that environmental stressor might be (e.g., days in which math and music both appear in the afternoon may not be a pattern most people would easily recognize!).
- Children with ODD often act out for very specific reasons. They are often inadvertently taught to respond to limit-setting in a negative manner. When positive behavioral supports are provided, they are often able to restructure their responses in a positive and motivated way. In contrast, the child on the autism spectrum may act out because the noise in the next room is highly distressing even though it does not bother any of the other students in the classroom. He may rock back and forth, cover his ears in response to the "noise," and hit the girl next to him who tries to console him. He is unlikely to calm down until the sensory stressor is removed, or until he has become accustomed to the sound (this is not likely to happen quickly). The *behaviors* may look the same for the student with ASD, the child with ODD, or the individual with bipolar disorder (e.g., Johnny hits Susie in the classroom), but the underlying *reasons* for the behavior are much different (i.e., chemical dysfunction, learned behavior, sensory-driven behavior, or rule based behaviors). Determining what caused the behavior in the first place often leads to an accurate diagnosis.

Recommended Books about Autism Spectrum Disorder for Parents and Families

A Land We Can Share "Teaching Literacy to Students with Autism" Paula Kluth, Kelly Chandler-Olcott 2008
Activities for Developing Pre-Skill Concepts in Children with Autism Toni Flowers
Activity Schedules for Children with Autism Lynn McClannahan 1999
A 5 is Against the Law Social Boundaries Straight Up Kari Dunn Buron
Asperger Syndrome and Rage Brenda Smith Myles
Asperger Syndrome and Sensory Issues – Myles, Cook, Miller, Rinner, and Robins 2000
Asperger Syndrome Tony Atwood
Asperger Syndrome and Adolescence: Practical Solutions for School Success Brenda Smith Myles and Diane Adreon 2001
Asperger Syndrome and Rage: Practical Solutions for a Difficult Moment Myles and Southwick
Augmentative Alternative Communication Beukelman & Mirenda 2005
Autism Kathie Harrington 1998
Autism Answer Book William Stillman 2007
Autism: A New Understanding Gail Gillingham 2000
Autism: Explaining the Enigma Uta Frith
Autism: Handle with Care Gail Gillingham
Autism & PDD Safety Pam Britton Reese and Nena C. Challenner 2002
Autism & PDD Social Skills Lessons –Primary Pam Britton Reese and Nena C. Challenner

- Behavior
- Home
- School
- Getting Along
- Community

Autism and PDD Picture Stories and Language Activities Patricia Snair Koski
Autism & PDD Creative Ideas Adams 1993
Autism & PDD More Creative Ideas Adams 1997
Autism Spectrum Disorders Handouts - What Parents Need to Know Boutot, Tincani 2006
Basic Skills Checklists Marlene Breitenbach, M.S.Ed., BCBA
Behavioral Interventions for Young Children with Autism Catherine Maurice 1996
Biological Treatments for Autism and PDD William Shaw 1998
Breakthrough: with video Karen Sewall 1998
Building Bridges Through Sensory Integration Ellen Yack, Paula Aquilla, Shirley Sutton 1998
Building Social Relationships – Scott Bellini Ph.D
Children with Autism: A Parent's Guide Michael D. Powers

Comic Strip Conversations Carol Gray
Creating a "Win-Win IEP" for Student with Autism Beth Fouse 1999
Do-Watch-Listen-Say: Social and Communication Intervention for Children with Autism, Kathleen Quill, 2000
Do You Hear What I Hear? Parents and Professionals Working Together for Children with Special Needs Janice Fialka and Karen Mikus
Freaks, Geeks & Asperger Syndrome Luke Jackson 2002
From Goals to Data and Back Again, Jill Fain Lehman and Rebecca Klaw 2006
Functional Independence Skills Handbook William Killion 2003
Giggle Time Susan Sonders
Grandparenting a Child with Autism, Kate R. Thomas
Hidden Child: The Linwood Method for Reaching the Autistic Child Simons, Oish 1987
Hidden Curriculum: Practical Solutions for Understanding Unstated Rules in Social Situations
Inclusive Programming for Elementary Students with Autism Sheila Wagner 1999
Incorporating Social Goals in the Classroom Rebecca Moyes 2001
Incredible 5-Point Scale Kari Dunn Buron and Mitzi Curtis
It Take Two To Talk Ayala Manolson 1992
Just Give Him the Whale, Paula Kluth & Patrick Schwarz 2008
Keys to Parenting The Child with Autism Marlene Brill 1994
Laughing and Loving with Autism Wayne Gilpin
Learn To Move, Move to Learn! Jenny Clark Brack
Management of Autistic Behavior Richard L. Simpson and Madelyn Regan 1989
My Social Stories Carol Gray and Abbie Leigh White 2003
New Social Story Book Carol Gray 1994/00
New Social Story Book Carol Gray 1994/00
Navigating the Social World Jeanette McAfee 2002
Nobody Nowhere Donna Williams 1992
No More Meltdowns Jed Baker PhD 2008
101 Activities for Kids in Tight Spaces Carol Stock Kranowitz 1995
1001 Great Ideas for Teaching and Raising Children with Autism Spectrum Disorders Ellen Notbohm and Veronica Zysk 2004
Out-of-Sync Child Carol Stock Kranowitz 2005
Out-of-Sync Child Has Fun Carol Stock Kranowitz 2003
Parent's Guide to Autism Charles A. Hart
Practical Ideas That Really Work for Students with Asperger's Syndrome Kathleen McConnell 2005
Quick and Easy-Ideas and Materials for the Classroom Rouse and Katera 1999
Reaching the Child with Autism Through Art Toni Flowers 1992
Reaching the Autistic Child a parent training program Martin A. Kozloff 1993
Reaching Out, Joining In Mary Jane Weiss, Sandra L. Harris 2001
Recipe Handbook of Easy to Use Activities for Teaching Autistic Children Barbara Bazeghi 2003
Room 14 A Social Language Program Carolyn Wilson:

- Instructors Manual
- Activities Book
- Picture Book

Sensory Integration and the Child Ayres 1991
Siblings of Children with Autism Sandra Harris 1994
Siblings of Children with Autism: A Guide for Families Sandra L. Harris
Sibshops Workshops for Siblings of Children with Special Needs Donald J. Meyer & Patricia F. Vadasy 1994
Social Behavior in Autism Edited by Eric Schopler
Social Skills Picture Book Jed Baker PH.D.2001
Social Skills Picture Book for High School and Beyond Jed Baker PH.D 2006
Social Success Workbook For Teens 2008 Barbara Cooper, Nancy Widdows
Solving Behavior Problems in Autism Linda Hodgdon 1999
Soon Will Come the Light McKean 1994
Source for Autism Gail J. Richard 1997
Source for Nonverbal Learning Disorders Sue Thompson
Successful Inclusive Teaching Choate 1997
Social Story Book, The New by Carol Gray
Social Story Book, The Original by Carol Gray
Souls Beneath and Beyond Autism Sharon Rosenbloom 2004
Steps to Independence Bruce Baker, Alan Brightman
Strategies for Organization Michelle Garcia Winner
Stress and Coping in Autism M. Grace Baron, et al 2006
Taking Care of Myself Mary Wrobel
Teach Me Language (A companion) Sabrina Freeman
Teaching by Design Kimberly S. Voss 2005
Teaching Children with Autism Kathleen Ann Quill 1995
Teaching Developmentally Disabled Children Ivar Lovaas 1981
Ten Things Your Student with Autism Wishes You Knew Ellen Notbohm 2005
That's Life! Social Language Nancy McConnell, Carolyn LoGiudice 1998
Thinking About YOU Thinking About ME Michelle Garcia Winner 2002
Thinking in Pictures and Other Reports from My Life with Autism Temple Grandin 1996
Thorn in My Pocket Eustancia Cutler 2004
Toileting by Nancy Dalrymple
Toilet Training for Individuals with Autism & Related Disorders Maria Wheeler 2004
Treasure Chest of Behavioral Strategies for Individuals with Autism Beth Fouse and Maria Wheeler 1997
Understanding Asperger's Syndrome – Fast Facts Emily Burrows and Sheila Wagner 2004
Unstrange Minds Roy Richard Grinker 2007
Unwritten Rules of Social Relationships Dr. Temple Grandin, Sean Barron 2005
Visual Strategies for Improving Communication Linda Hodgdon
Visual Strategies for Behavioral Issues Linda Hodgdon 1995

Frequently Used Special Education Acronyms/Terms

Acronyms	Terms
AAC	Alternative Augmentative Communication
ABA	Applied Behavioral Analysis
ABC	Antecedent, Behavior, Consequence
ADA	Americans with Disabilities Act
ADD/ADHD	Attention Deficit/Attention Deficit Hyperactivity Disorder
ADLs	Activities of Daily Living
ASD	Autism Spectrum Disorders
ASL	American Sign Language
AT	Assistive Technology
AYP	Adequate Yearly Progress
BIP	Behavioral Intervention Plan
DSM	Diagnostic and Statistical Manual of Mental Disorders by the American Psychiatric Association
ECSE	Early Childhood Special Education
ESY or EYS	Extended School Year or Extended Year Services
FAPE	Free Appropriate Public Education
FBA	Functional Behavioral Assessment
FC	Facilitated Communication

IDEA	Individuals with Disabilities Education Act
IEP	Individualized Education Program
IFSP	Individualized Family Service Plan
LEA	Local Education Agency
LRE	Least Restrictive Environment
MDR	Manifestation Determination Review
NCLB	No Child Left Behind Act (Elementary and Secondary Education Act)
OT	Occupational Therapy
PBS	Positive Behavioral Supports
RTI	Response to Intervention
Section 504	Section 504 of the Rehabilitation Act
SLP	Speech/Language Pathologist

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