

Autism: Including Children with Social, Communication, and Behavioral Needs

A General Description of Autism Spectrum Disorders

Becoming Aware of the Characteristics of Autism Spectrum Disorder

Autism was first recognized clinically in 1943 by a United States child psychiatrist named Leo Kanner. His early description included a definition that from early infancy, children with Autism have the inability to form social relationships. One year later, a pediatrician living in Germany named Hans Asperger described a set of characteristics or symptoms similar to those described by Kanner. These symptoms, later named Asperger Syndrome, included:

- social impairment,
- poor eye contact,
- limited empathy,
- difficulty using and interpreting nonverbal communication,
- unusual or monotone-like speech,
- an intense absorption in certain topics, and
- marked resistance to change.

Unlike Kanner's description, Asperger's definition did not involve significant delays in language or cognitive development, but did include impairment in fine and gross motor skills. Although described in 1944, Asperger's publication did not reach international distribution until recently due, in part, to the influence of World War II in Germany.

Autism, also referred to as Autism Spectrum Disorder (ASD), is now recognized around the world as a developmental disorder of neuro-biological origin that affects brain functioning and usually is identified in the first three years of life. However, the cause and the increase in the diagnosis of ASD still remains a mystery under intensive research. In the majority of cases, there is no single identifiable medical, genetic, or environmental cause, although all of these are under scrutiny. *Studies show that males are affected four times more often than females.*

Brain Disorder

Autism is a brain disorder that typically affects a person's ability to:

- communicate,
- form relationships with others, and
- respond appropriately to the environment.

Some people with Autism are high functioning in their ability to communicate and understand their environments, while others may experience delays in cognitive development or have moderate-to-severe delays in language and communication skills. Others could seem closed-off to the world and appear locked into very rigid patterns of thinking and behavior.

Although people with Autism do not have exactly the same characteristics or symptoms, they tend to share certain general characteristics in social, communication, and sensory difficulties that affect their behavior in predictable ways.

Life-Long Disability

Considered to be a life-long disability, Autism is described as a behavioral disorder in which the number of characteristics and symptoms vary in severity along a spectrum from mild to severe, from one child to the next. It is described as an uneven profile of development with a pattern of:

- qualitative impairments in understanding and interacting in social relationships,
- deficits in communication development, and
- unusual patterns of behavior, interest, and activities.

Some children also experience unusual responses to sensory stimulation such as being bothered by certain sounds, smells, lights, touch, or food textures.

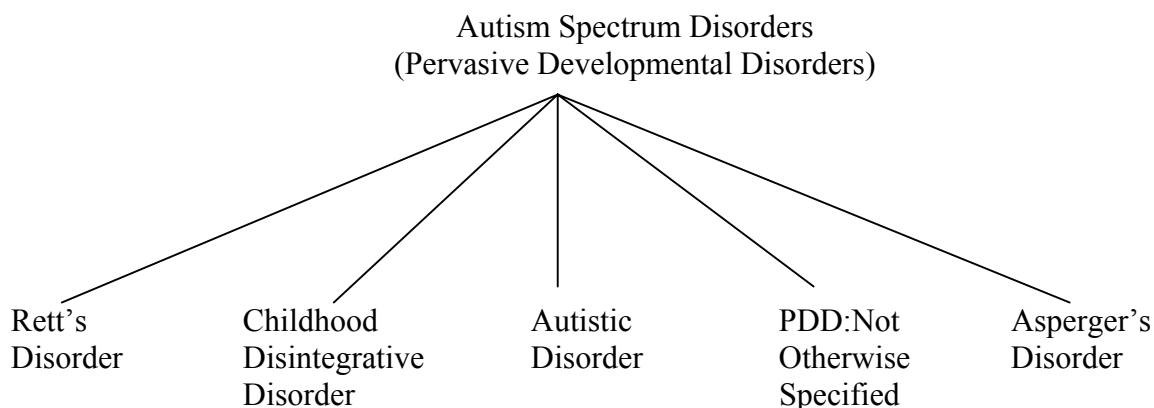
Several studies referenced in Cohen and Volkmar's (1975) Handbook of Autism and Pervasive Developmental Disorders have shown that as many as 75 percent of people with Autism also have cognitive delays, 25–30 percent may develop seizures by adulthood, up to 10 percent could have extremely advanced skills in one particular area, and over 60 percent have a secondary mental health diagnosis which may include depression, mood disorders, anxiety or panic attacks.

Autism is often referred to as the “hidden disability,” due to the fact that there are no common physical characteristics. However, the impact on the social aspect of development is considerable.

Terms Used

The term Autism Spectrum Disorders (ASD) is frequently used to describe the range of related conditions also known as Pervasive Developmental Disorders (PDD).

Professionals in the medical and psychiatric field often use The Diagnosis and Statistical Manual of Mental Disorders or DSM published by the American Psychiatric Association to define and diagnosis this disorder. According to the DSM-IV (1994), *PDD is not a specific diagnosis but an umbrella term, under which the following specific diagnoses are defined.*



Joey is a bright-eyed child who is fascinated by the movement of the clouds in the sky on a windy day and begs to go for car rides. He loves to watch the spinning motion of the wheels on his toy trucks. He does not like the noise that the vacuum cleaner makes when his mother does housecleaning, and screams to have her turn it off. His vocabulary for a three-year-old consists of “mama,” “NO,” “puppa” for puppy, and “eeeee” for eat. He is very selective about what foods he eats, and refuses to try new foods. Joey’s parents describe his first three years of life as challenging and puzzling. He seemed different from other infants from the day he was born. He rarely made eye contact, did not respond to voices and noises around him, and appeared to be deaf. He did not like to cuddle and usually preferred to spend time alone, watching the movement of the fan, the curtains blowing in the breeze, or the circular motion of his wind-up toys. At his two-year-old checkup, his pediatrician suggested further evaluation due to concerns in language delays, lack of social responsiveness, and unusual, non-engaging, repetitive play. A medical diagnosis of autistic disorder was used to describe Joey’s unusual developmental pattern. He is now receiving Early Childhood Special Education Services through his local school district.

The Prevalence of Autism

Sigman and Capps (1997) describe the reported prevalence of Autism as varied, “depending upon how the disorder is defined and diagnosed. Surveys conducted in Europe, Japan, the United States, and Canada report that the incidence ranges between four and ten Autistic children (children with Autism) in every 10,000 births.”

During the 1970s and 1980s the prevalence of Autism in the United States was thought to be two to five per 10,000 people. According to the Autism Society of America, the prevalence rate of Autism has increased to fifteen per 10,000 individuals. Over the past decade, the reported prevalence of Autism has appeared to skyrocket. Recent studies indicate as many as 400,000 people in the United States today have some form of Autism, which makes it more common than Down’s Syndrome or childhood cancers.

In 1998, The National Institute of Child Health and Human Development (NICHD) reported that prevalence ranges from seven to forty-eight per 10,000 births, when considering the broader spectrum of the disorder. The following figures were reported to the National Autism Society of America:

- One in 666 individuals with “classic” Autism
- One in 500 individuals with Autism and Pervasive Developmental Disorder: Not Otherwise Specified
- One in 200 individuals with Autism, PDD-NOS, and Asperger’s Disorder

In some states, the prevalence rate for the Autism Spectrum Disorder category increased an annual average of 30 percent over the past ten years. The total numbers of students reported on statewide child count reports show that an increasing number of students of all ages have met the educational criteria for the Autism Spectrum Disorder category to receive special education

services. In 2009, the Center for Disease Control confirmed that the current rate of Autism is at 1 in 100. This has varied by state with some states documenting 1 in 75.

These increases might not accurately reflect many young children under the age of seven who could have been listed under a more general developmental delay category. Therefore, the total numbers could be considerably higher.

Some reasons for the increases in the prevalence of Autism can be attributed to:

- more complete medical diagnosis and educational evaluations, and
- to a broader and clearer definition of the spectrum of Autism in general publications and the media.

Early detection is crucial in understanding the developmental differences and to plan appropriate and early intervention for each child.

There is a great deal of research occurring worldwide to evaluate the reason for the continued increase in Autism.

Identifying the Early Indicators or Red Flags

Developmental milestones assist parents, early childhood practitioners, and physicians in monitoring a child's growth and developmental pattern. These milestones, or markers of development, show the progress a child makes in her journey to adulthood. While children develop in fairly similar patterns, it is the unusual course of development that draws attention.

With more and more information on Autism being disseminated, parents, practitioners, and physicians are able to discuss concerns and identify early indicators, or red flags, that warrant further observation and/or evaluation to determine the full extent of the child's unusual pattern of development.

The typical developmental milestones described here include those in the areas of:

- communication skills,
- social interaction,
- play behaviors,
- sensory differences, and
- motor development.

Children under the age of fifteen months should exhibit most of the following milestone markers in their development. If many are missing or unusual in description, it warrants a discussion with the child's parents, who might then take the concerns to their physician or pediatrician.

Birth – 15 months

- Shows an interest in watching faces of people
- Smiles back when smiled at or in interactive play
- Turns toward sounds and to the call of her name
- Shows anticipatory responses such as lifting arms to be picked up
- Establishes eye contact during interactions
- Exchanges back-and-forth sounds with familiar people

- Exchanges back-and-forth gestures such as giving a toy, reaching for a desired item, or taking an offered toy or item
- Uses a few gestures to get needs met (reaching, waving, showing, giving, pointing)
- Imitates the actions of others (tapping hammer, pounding table)
- Plays peek-a-boo, patty cake, or other social games
- Repeats actions that produce attention or laughter
- Makes a variety of sounds like “ma,” “ba,” “na,” and “ga”
- Uses pointing to draw attention to something of interest
- Uses pointing to indicate a wanted item
- Begins to combine sounds and words to get needs met and draw attention to something of interest
- Uses and understands at least three words, such as “mama,” “bottle,” or “bye-bye”

15 months – 36 months

Between the ages of 15 and 36 months, children should be exhibiting the following developmental milestones.

- Uses many gestures with words to get needs met
- Uses at least four different consonants in babbling or words (m, n, p, b, t or d)
- Uses and understands at least ten words by the age of 18 months
- Understands the names of familiar people by pointing or looking at them when named
- Identifies several body parts by pointing or showing on request
- Shows interest in other children and plays near or with them
- Engages in a broad range of play activities
- Uses toys to create simple make-believe play sequences (such as people in a play house going through a daily routine)
- Engages in imaginative play (feeding a doll) and looking for attention from a familiar adult
- Uses and understands at least 50 words by the age of 24 months
- Puts two and three words together in phrases to comment and get needs met
- Enjoys playing with other children of the same age in similar activities by the age of 36 months
- Enjoys pretending to play different characters with other people
- Answers “what,” “where,” and “who” questions easily
- Talks about interests and feelings from past and future events

Parents often consult pediatricians and family physicians with concerns about their children’s development. Due to the nature of the ASD, parents and physicians must be aware of the red flags that could indicate a child is at risk for atypical development and needs further evaluation. There is a national push to have every child screened for ASD at their two-year-old check up, but the implementation and buy in will take time.

The following indicators are adapted from information distributed by Check for Autism Really Early (CARE) (2002) and listed as “Early Parental Concerns” and “Red Flags or Absolute Indicators” which would indicate additional screening or evaluation should occur.

Early Parental Concerns:

It is important for educational, medical, and early childhood practitioners to realize that parents are usually correct in the concerns that they express about their child's development. If a parental concern is expressed, there is a high probability of a problem in some aspect of their child's development. However, a lack of concern does not imply normal development.

The following parental concerns could indicate a very young child is at risk for atypical development. If a cluster of concerns is noted (any typical child may have a single item on the list), they should be taken seriously, prompting immediate further investigation and routine developmental screening.

Communication Concerns:

- Does not respond to her name
- Cannot tell someone what she wants
- Language is delayed
- Does not follow directions
- Appears deaf at times
- Does not point or wave bye-bye
- Previously said a few words but now she does not

Social Concerns:

- Does not smile socially
- Seems to prefer to play alone
- Does things "early"
- Has poor eye contact
- Is not interested in other children
- Is in her own world and tunes others out
- Gets things for herself and is very independent

Behavior Concerns:

- Throws tantrums, is hyperactive, uncooperative, or oppositional
- Gets stuck on things over and over
- Toe walks and has odd movement patterns
- Has unusual attachments to toys (e.g., always holds same toy)
- Does not know how to play with toys
- Is oversensitive to certain textures or sounds
- Lines things up

The early childhood practitioner has an important role in assisting families as they sort out concerns regarding the development of their child. The practitioner's role includes:

- Knowledge of early indicators, or red flags
- Practical discussion with parents regarding concerns
- Knowing the referral sources in the local community
- Implementing portions of any early intervention plan, if appropriate, as one of the team members

Red Flags or Absolute Indicators

The following are red flags, or absolute indicators, and may indicate a young child is at risk for atypical development. These concerns should be taken seriously, prompting further investigation with screening and immediate evaluation.

- No big smiles or other warm, joyful expressions by the age six months or thereafter
- No back and forth sharing of sounds, smiles, or other facial expressions by the age of nine months or thereafter
- No babbling by the age of twelve months
- No back-and-forth gestures, such as pointing, showing, reaching, or waving by the age of twelve months
- No words by the age of sixteen months
- No two-word meaningful phrases (without imitating or repeating) by the age of twenty-four months
- ANY loss of speech, babbling, or social skills at ANY age

The Identification Process

Understanding the Early Screening Process

The first three years of life are crucial to a child's development. The importance of early screening and identification of possible Autism Spectrum Disorders in young children is critical to early intervention program design and development.

Fewer than two percent of all children with a developmental delay or disability are identified before the age of three.

In the Minnesota Autism Task Force Report, the following recommendations are given, "Autism is a complex and treatable disorder. The identification of Autism Spectrum Disorders, whether made medically or educationally, should be shared with the parent and/or guardian and Individualized Family Service Plan (IFSP) team members as soon as possible. *Early diagnosis is critical for appropriate intervention and meaningful outcomes for children with Autism Spectrum Disorders*" (Minnesota Autism Project, 2000).

Observing Children and Recording Unusual Patterns of Development

Basic screening for Autism can occur in a short amount of time. There are a variety of formalized screening instruments published and utilized by both the medical field and educational early-intervention teams.

With prior training, an early childhood assessment team might use one of the following tools to quickly identify the early indicators or red flags that would warrant a referral for a further multidisciplinary evaluation. These include:

- The Checklist for Autism in Toddlers (CHAT) (Baron-Cohen & Charman, 1996) or the Modified Checklist for Autism in Toddlers (M-CHAT) (Robins et al., 1999) which are designed to screen for Autism at eighteen months of age;
- The Screening Test for Autism in Two-Year Olds (STAT) (Stone et al., 1999);
- the Social Communication Questionnaire (SCQ) (Lord, 2002) designed for children age four and older;
- the Australian Scale for Asperger’s Syndrome (Garnett and Attwood, 1994) for older children; and
- The Pervasive Developmental Disorders Screening Test—II (PDDST-II) (Siegel, et al., 2001) Autism Spectrum Disorders Screening Questionnaire (ASSQ) (Ehlers, Gillberg, & Wing, 1999).

Through a combination of observation and interaction, a physician, psychologist, or educational specialist can evaluate the three core areas of the ASD.

Outside of the formal screening process, early childhood practitioners can observe young children in early childhood settings. Informal notes, data charts, or other incidental records kept by early childhood practitioners must be shared with parents. If parents choose to go for additional screening or evaluation, they can decide what information to share with a physician, medical specialist, or educational team.

Keeping records of behavior and unusual patterns of development can be done in one of the following ways:

1. Writing factual, observational notes in a notebook.
2. Keeping simple data charts to include a column for date, time, behavior noted, length of time behavior occurred, what happened just before the behavior occurred, and what occurred immediately afterward (What did the adult do? What did the child do?).
3. To record how frequently a behavior occurs, a simple tally sheet might be designed, which would include date, length of time of observation (e.g., two minutes or five minutes), behavior being recorded (e.g., nose-picking or hand flapping) and a column for tally marks.

Sample Record of Behavior

Name: _____

Date	Time	Antecedent (What happened) before the behavior	Description of behavior	Length of behavior episode	What happened afterward	Comments

Sample Tally Record

Name:

Date	Length of observation (e.g., 2 min, 5 min)	Behavior recorded	Total number of tally marks (one tally per behavior noted)

Looking at Medical Considerations

Early screening for ASD can be done through a medical facility and/or through the educational process. These are two different diagnoses and each will provide different qualifications for services. It is a more frequently diagnosed disorder than in previous years, but is often difficult to diagnose due to the variety of characteristics seen from one child to the next.

There are no specific medical tests for diagnosing Autism; however, a doctor can complete various medical tests to rule out other possible causes or reasons for behaviors associated with Autism that could be shared by other disorders. *An accurate diagnosis requires skilled professionals to observe a child's communication, social, developmental, and behavioral levels.*

A medical diagnosis is not required for accessing special education services in the public school setting. However, it can provide a family with a more complete picture of the child's overall development, both medically and educationally, before planning appropriate interventions.

Regular visits to a pediatrician or family physician can provide important opportunities to monitor a child's development and to address specific concerns.

First Signs, Inc. is a national organization dedicated to social, emotional, communication, and behavioral development in early childhood. Their goal is to promote healthy development and the early identification and intervention for all developmental disorders, including Autism. They have collaborated with their medical advisory board to outline a seven-step process for screening young children. The guidelines were adapted from the American Academy of Neurology and the American Academy of Pediatrics "in order to establish standard practices among physicians, to simplify the screening process, and to ensure that all children receive routine and appropriate screenings and timely interventions" (www.firstsigns.org).

The recommended early-screening process, as described on the First Signs, Inc. web site, is as follows:

1. Chart developmental milestones and make general observations
2. Conduct routine developmental screening

If concerns are raised:

3. Refer to Early Intervention Team or to a specialist for further developmental evaluation
4. Conduct a lead screening if pica (mouthing or eating many non-food items) is present
5. Perform formal audiological assessment
6. Conduct Autism screening

If additional concerns are raised:

7. Refer for formal diagnostic evaluation by pediatric neurologist, psychiatrist, psychologist, or developmental pediatrician

Eligibility for Special Education and Related Services

Children with Autism Spectrum Disorders are entitled to a free, appropriate public education when they meet the state educational eligibility criteria and demonstrate educational needs.

A medical diagnosis is not required to meet the educational criteria but provides further information on the whole child.

An educational team might include:

- the child's parents
- early childhood practitioner
- occupational and speech pathologists
- extended family members
- teachers
- community health workers
- family physician
- social worker
- or others

The educational team determines, through a team evaluation process, if a child meets the criteria to receive educational services under the special education category of ASD. These special education services are mandated to begin at birth and can be used through early intervention programs established by the public school in collaboration with various community and county services. A multi-disciplinary team must include a professional with experience and expertise in ASD and knowledge of typical development.

IFSP and IEP

Once the evaluation is completed and summarized, the evaluation summary report becomes the foundation for an Individualized Family Services Plan (IFSP) for children birth to 3 and Individualized Educational Plan (IEP) for children 3-21 each of which serve to address the individual needs of the child. Each plan covers basically the same components but is presented in slightly different formats.

In many states, the eligibility criteria for special education services under the Autism Spectrum Disorders category must address the three core features, which include:

- social interaction,
- communication,
- behavior,
- interests, and/or activities.

Documentation of present levels of performance in each of the core features must also be supported by data showing identified educational needs.

Due to the range of characteristics and needs within the Autism spectrum and the related clinical or medical concerns, children with different educational profiles and/or a medical diagnosis could be eligible to receive services under the state educational criteria. An effective educational program that addresses the child's strengths and unique educational needs is then planned and implemented.

The plan includes:

- the setting and location of services
- the service providers
- amounts of time
- the methods of instruction
- curriculum to be used.

Specific adaptations and/or accommodations that might be needed to assist the child to succeed in inclusive settings are also included in the plan. Adaptations or accommodations could be things like the use of a visual picture schedule to help the child understand what will happen throughout the day or the use of picture symbol cards and/or small objects to represent words to assist in communication.

Specific teaching strategies such as a structured learning environment or discrete trial teaching techniques could also be used. Another adaptation could include using sensory activities such as jumping on a trampoline for calming, using a weighted vest or blanket for calming, or using headphones to block out noises that disturb the child. Some of these adaptations or accommodations could be appropriate to implement in an early childhood setting and in a home environment.

The Referral Process

Supporting Families

Relatives, friends, or early childhood practitioners could have concerns about a child's development but are uncertain how to bring these concerns to the attention of the parents. As difficult as this might be, it is crucial to pursue any concerns to ensure appropriate early intervention services are started. Generally speaking, early childhood practitioners are in a position of helping children and families but might find themselves in a difficult position of sharing specific concerns regarding a child's developmental profile with parents. However, in reflecting back on those early discussions, many parents have reported to physicians, teachers,

and early childhood practitioners that if concerns are suspected, they want to know as soon as possible. As one parent stated “If you know or suspect something isn’t right, please let us know as soon as possible. Don’t protect us from something we should be aware of and can do something about. We may not like what you have to say, and we may be angry that it is brought up, but in the long run we will learn to appreciate knowing as early as possible.”

Bringing Concerns to Parents

Early childhood practitioners are encouraged to bring concerns to the attention of the child’s parents. In doing so, here are a few Do’s and Don’ts that have been offered by parents of children with ASD:

DO:

1. Bring up issues of concern when both parents are present, whenever possible.
2. Start with observations, questions, or concerns of the parent. Be a good listener.
3. Focus on milestones, absolute indicators, and the need to “rule out” other possible causes.
4. Use lead-in phrases such as, “Has anyone brought up the possibility your child may be lagging behind others in communication?” or “When we see difficulties in social interaction, communication and a limited range of interests, we need to refer a family for further evaluation.”
5. Put yourself in the parent’s shoes. Be supportive, not judgmental.
6. Give specific examples of behavioral indicators that verify your concerns.
7. Refer parents to other medical or educational resources to ask further questions. Be willing to assist in the referral process by offering a list of questions, sharing a summary of concerns, etc.
8. Emphasize the importance of early identification and intervention.
9. Follow up with the family. Check back frequently.

DON’T:

1. Dismiss a parent’s concerns. Seek resources together.
2. Scare a parent; keep it positive.
3. Back off from parents who reject the concerns on the initial discussion. If the concerns continue to be present, continue to revisit the behavioral indicators.
4. Assume that bringing the concerns to the parent’s attention is someone else’s responsibility, or that parents are not ready to hear the information. Objective and informative concerns NEED to be shared with parents.
5. Make assumptions about a support system parents may have; you may be it.

A Diagnosis Never Defines a Child

There are many people who do not understand the range of developmental delays and disorders. Even fewer people understand the opportunities for intervention and treatment. Disabilities such as Autism Spectrum Disorder appear as a subtle “hidden disability” when compared to those with a more obvious physical manifestation, especially when they are present in infants and toddlers. “This lack of knowledge is further compounded by stigma and fear” (www.firstsigns.org).

Some early childhood practitioners or clinicians might question if discussing concerns leads to labeling a child. As First Signs, Inc. (2001) describes to parents, *“a diagnosis doesn’t have to be a label. An appropriate diagnosis may describe a child’s challenges, but should never define a child.”*

Early identification and intervention enable parents and practitioners opportunities to understand each child as a unique individual and to meet each child’s distinct needs to prepare them for adulthood. The goal is to help each child reach her full potential.

Working with children with Autism and their families in the United States also means, “being sensitive to the cultural context of service delivery” (National Research Council, 2001). This means providing information and services in a language the family is comfortable with and understanding the impact a child with a disability has on a family’s cultural context.

Where to Go for Help

Using the Local Interagency Early Intervention Committee (IEIC)

In 1986, the US Congress mandated that a range of services, referred to as “early intervention,” must be provided to infants and toddlers with disabilities. Public Law 105-17 outlines the provision of special services to enhance the development of infants and toddlers with disabilities and to minimize their potential for developmental delay.

In many states, early intervention is a statewide, comprehensive, coordinated, multidisciplinary, interagency system that provides early intervention services for infants and toddlers (under the age of three years) with disabilities and their families.

An Interagency Early Intervention Committee consists of representatives of:

- county service providers such as human services, public health, and
- education and
- community providers such as child care settings, private preschools, and Head Start.

The purpose of the Interagency Early Intervention Committee is to continually assess and revise the system of identifying children, ages birth to school age, who may have a delay or disability and be in need of services individually or as a family.

A Child Find subcommittee works with a Public Awareness subcommittee to distribute information about the screening and referral sources available within that county. Individual contact listings are usually listed in a telephone directory under Early Intervention or Interagency Early Intervention Committee.

Early Childhood Health and Developmental Screening

Many states have passed laws mandating that every child must be screened once before entering school. Local school districts or public health agencies offer this screening for children between the ages of three and six years, before a child starts kindergarten.

The state educational agency or department sets guidelines for early childhood screening, often in consultation with the state's department of health. Components of the screening include:

- vision
- hearing
- developmental screening
- immunizations review
- physical growth
- identification of risk factors that could influence a child's learning, and
- a summary interview with parents.

Included in the developmental screening might be a parent report and on-site observation by a special education teacher, school psychologist, kindergarten teacher, pre-kindergarten teacher, registered nurse, licensed physician.

Results shared with a parent indicate whether additional referrals and/or evaluations should take place to ensure that a child is developing in a typical, age-appropriate manner. If concerns are noted, a referral for a medical, mental health, or educational evaluation could be suggested.

Early Intervention Programs

Early intervention programs that serve children with special needs could be accessed through local school districts by asking for:

- the Early Intervention Program
- the Birth-to-Three Program
- the Early Learning Program

All of these names describe a set of services that are mandated through the public schools for children under the age of three identified with educational or medical conditions known to hinder typical child development.

These services could include:

- early childhood special education,
- occupational therapy,
- physical therapy,
- speech/language therapy,
- assistive technology,
- services from an audiologist or teacher of the deaf/hard of hearing,
- services from a vision specialist, and
- collaboration with medical personnel and county agencies.

Early Childhood Special Education Referrals

Children beyond the age of three years with identified special needs requiring educational services could participate in Early Childhood Special Education services through the local school district. For some children, the transition occurs from the birth to three-year-old programs into the center-based, three- to six-year-old programs, while for others there could be a referral following the early childhood health and developmental screening or a direct referral to the local school district's program.

Accessing County Services and Systems of Support for Families

There are a variety of county-sponsored child and family services available to those families who meet eligibility requirements. Services may range from:

- maternal and child health programs
- financial aid and management assistance
- state-sponsored children's health insurance programs
- identification of child care resources
- mental health collaborative
- juvenile court services
- Head Start
- medical assistance
- respite care
- medical equipment
- case management
- more

Contacts in local communities are listed in a phone directory under Human or Social Services and under Community or Public Health Services.

Characteristics of Effective Interventions

A variety of interventions have been developed over the years to assist families and educators in working with children with Autism. These interventions and strategies seek to enhance the ability of each child to participate more fully in her environment by improving communication and promoting appropriate social skills. "Rather than attempting to provide a cure, interventions seek to enhance development and well-being by addressing particular sets of difficulties" (Sigman & Capps, 1997).

Today, in most countries, the core intervention programs for children with Autism are educational. These programs might be carried out in family homes, early childhood settings, or specialized school settings. Most of these early education programs concentrate on promoting socialization and communication skills. Children are taught socially appropriate behavior and how to get along in a group, and how to generalize skills across various settings and people.

Enhancing the Development of Communication and Language Skills

Communication is more than simply being able to string a series of words together. "It is the ability to let someone else know that you want something, to tell someone about an event, to describe an action, and to acknowledge another person's presence; it implies a social situation between two or more individuals" (Layton, Watson, & Quill, 1995).

Research and common practice show that effective communication does not "just happen." Important factors necessary for successful communication include:

- understanding cause and effect
- having a desire to communicate
- having someone to communicate with
- having something to communicate about
- having a means of communication

Both the sender (the person talking, signing, gesturing, or using a communication device) and the receiver of the communicative interaction (the listener) extend a great effort to accomplish the desired outcome. If either partner experiences difficulty participating in the exchange, the whole process becomes extremely frustrating. Thankfully several techniques and strategies can enhance the success of the communication process. Among these are the use of visual supports and strategies.

Visual Supports

Visual supports are defined as “those things we see that enhance the communication process. They are an integral part of the communication circle, enhancing effective receiving, processing, action and expression” (Hodgdon, 1997).

Visual supports have been shown to be very effective with children and adults with Autism Spectrum Disorders and with many other language and processing disorders. Rather than verbal words floating arbitrarily into space, visual supports rely on the fact that the information to be communicated is in a concrete, visual form that remains constant.

A person who experiences difficulty understanding spoken words might understand the message immediately with the supplemental use of a picture, written note, or sign.

Visual supports may include the following:

1. *Body language*: Facial expressions, body movements, reaching, touching, pointing, eye contact, eye gaze, position, and distance of the speaker’s body in relation to the listener
2. *Natural environmental cues*: Arrangement of the furniture in the room, location and movement of people and objects, printed materials such as signs, logos, labels, directions, written messages, choices, or menus
3. *Traditional tools for organization and giving information*: Calendars, daily planners, schedules, shopping lists, signs, labels, maps, instructions, television guides, theater guides, telephone books, etc.
4. *Specially designed tools to meet specific needs*: Specific picture schedule of daily or weekly events, small picture card used to request a bathroom break, visual timer used to show how remaining time is going away, etc.

Visual Strategies

Effective visual strategies can be used to provide a young child the opportunity to request something (hand over a picture of a cup to ask for a drink), protest (show an “all done” card to indicate done or no more), or make choices (point to the object or picture when given the choice and the directive “show me” or “choose”).

Pictures or objects used for communication should be paired with the spoken words to model the appropriate language for the child.

Using visual structure in setting up the room environment allows the child the opportunity to clearly see how the spaces are defined and what activities and expectations will occur within each defined space. For example, using book shelves, room dividers, or colored tape to mark a border on the floor where the limits of large block building play is to occur, keeps that activity from overflowing into the quieter book corner or housekeeping area.

Defining the schedule of the day with visual supports such as a small picture schedule, also allows a child with Autism to more clearly understand what will happen next, how long an activity could take, and when the breaks or reinforcing activities take place.

All of these supports show a child through the visual mode where things go, what will happen and whose turn it is to do the activity, this reduces the chance of inappropriate behaviors that could result from a lack of understanding and processing the auditory language presented.

Encouraging Social Skill Development in Natural Settings

Most children are born with a predisposition to want to engage in social relationships with people. Infants learn early to elicit and respond to eye contact, social smiles, turn-taking through back-and-forth cooing and babbling, and sharing attention through following eye gaze and gestures. Relationships are formed with familiar people, and most young children desire and seek out attention in those relationships.

Children with Autism, on the other hand, could often see other children and adults more as a tool to obtain wants and needs, rather than as someone to engage in a social interaction.

Studies of video clips of one-year-old birthday parties of children later diagnosed with Autism show that even at a young age, the children had a tendency to look up fewer times in response to their name being called, to engage less often in face-to-face interaction with parents and caregivers, and were less likely to follow pointing gestures.

Play skills in young children with Autism can range from preferring solitary activities, manipulating objects in a stereotyped fashion, or avoiding social interactions of others to the other end of the spectrum where a child could truly want and attempt to interact with peers but not know how to do it. The child could look awkward or odd, may be teased by other children, or may be isolated by peers.

The process of teaching social skills and play skills to young children with Autism involves:

- assessing the existing skills
- determining what skills need to be taught
- how they will be taught
- how the progress toward those goals will be measured

Many children with ASD do not exhibit typical patterns of development, especially in the areas of language development and social skills. This makes planning goals and strategies more difficult; however, goals fairly common to many children include:

- improving social interaction with adults
- initiating and responding to peer interactions
- developing appropriate play skills
- using communication skills in a variety of social settings to obtain wants and needs
- to request and share information with others

Suggestions for parents and early childhood practitioners to encourage social-skill development in young children include the following:

1. Maintain a daily routine and structure. Arrange a play space with materials that are visibly accessible and highly organized. (Using labels or outlines helps with cleanup of materials).
2. Provide visual cues (e.g. gestures, pictures and signs) along with simple spoken language to help the child understand your meaning.
3. Teach appropriate play with toys through the use of imitation (e.g. “Do like me,” or “Do this” and model play with the toy such as cars going down a ramp rather than being lined up or pounding the balls into the tunnel holes rather than shaking a hammer and staring at the movement).
4. Reinforce appropriate, positive social interactions such as eye contact, responding to their name, sharing with a peer and initiating a play scenario with verbal praise, combined with either an edible or non-edible item the child prefers. Gradually decrease the use of the additional edible or non-edible item so that the child learns to respond appropriately to the reinforcement that occurs naturally within the social interaction.
5. Set up occasional, structured play situations where peers with typical development are pre-taught the play activity and encouraged to include the child with Autism in the play activity (e.g. peers with typical development are taught phrases to use to include the child with Autism in a turn-taking game such as rolling the ball back and forth, or playing a table game such as Jenga).
6. Use pictures and a simple story to show the sequence of specific skills needed for success in a particular situation. Children rely on their skill of rote memory and can recall the sequence of the story in needed situations. (e.g. “Many times children like to play with the same toy. When someone else has a toy I want, I need to use words or my picture card to ask for a turn. I can say thank you to the other person for sharing. I can share the toy with someone else. Taking turns and sharing makes people feel happy.”)

Guiding Challenging Behaviors

In an effort to provide appropriate programs for children with Autism, one of the most frustrating and stressful issues parents, early childhood practitioners, and teachers face is that of guiding difficult or challenging behaviors. It can be extremely difficult to provide natural environments and inclusive settings for children who exhibit behaviors such as destruction of property, physical aggression, self-injury, and tantrums. These types of behaviors can easily isolate or exclude young children from social, educational, family, and community activities.

Conducting a functional behavior analysis can provide critical information that will contribute to appropriate programming.

Perspective

Defining challenging behaviors can be done from a child's perspective or the perspective of the parent or teacher involved with that child.

From a child's perspective, challenging behaviors could result from the combination of the inability to understand and process the verbal and nonverbal language in the environment and poor ability to respond or communicate her needs and wants. It may include extreme difficulty in initiating and maintaining social interactions and relationships, which makes playtime frustrating; confusion about how the child's particular behaviors have an impact on others in the environment; and engaging in restrictive and repetitive behaviors and interests that could limit the child's ability to fit in with peers.

From a parent or practitioner's perspective, the behaviors can appear to be a lack of compliance with daily routines, tantrums, and destruction of property and aggression toward self or others as a means of control.

Communication

Due to the impact of the language disorder on children with Autism, many do not develop conventional ways of communicating wants and needs. Although many children display speech and language skills that serve a function of obtaining wants and needs, they may "develop idiosyncratic, unconventional, or inappropriate behaviors to communicate such as self-injurious behavior, aggression, or tantrums.

Challenging behaviors are often used to gain attention, to escape from a task or situation, to protest against changes of schedule and routine, or to regulate interactions in a predictable manner" (National Research Council, 2001).

Behavior, perspective, and communication

It is helpful to look at challenging behaviors from the perspective of the child who may be attempting to communicate something about the situation in a manner that works. Children learn early to repeat a behavior that worked in getting their needs met.

After it is determined that a child may exhibit challenging and inappropriate behaviors as a means of communication, the next step is to identify what may be triggering the inappropriate behavior and what the child is attempting to communicate.

Documenting and recording

Keeping track of behaviors can give information on how often they occur, how long they last, or what happened immediately before to set off the behavior. It can also give information about what may have happened immediately after the behavior sequence, where the child felt a need was met and, therefore, the behavior decreased.

Documenting this information can be done in a notebook, using a journal format, or on specifically designed record forms. For example, to record the frequency of a child biting her hand, a chart could have columns that list the date, time, the activity that the child is engaged in at the time, what intervention made the biting stop, and comments.

Sample Behavior Frequency Record

Name: Sally

Date	Time	Activity child is engaged in	Behavior(s)	Intervention that caused behavior to stop	Comments
5-22	9:15am	Free play in EC room	Biting hand of adult	Leaving the classroom	Child looking for an escape from noisy, unstructured time. Settled down in hall, had drink of water, and returned when class was settled into routine
5-23	9:20am	Moving into free play	Biting self on the arm	Going for a walk in the hall	Escape from noise and bustle of classroom moving into free play stations
5-25	9:10am	Moving into free play	Biting	Leaving the classroom	Escape

Patterns in Behavior

Looking over this data can lead to some conclusions that might indicate if a pattern occurs such as during a specific activity, around a certain person, or as part of a string of behaviors in a communication attempt.

Case Study

In one such preschool situation, a five-year-old girl with Autism was biting herself and adults who came near her. Upon further observation, it was discovered that the child did indeed have a sequence of behaviors that lead up to the biting, all in an attempt to communicate the need to escape the situation.

The behaviors occurred during the unstructured, noisy, free-play portion of the morning preschool schedule. This child began the communication sequence by looking at the door then, looking at an adult several times, trying to get the adult to look toward the door. She then added the word “bye-bye” to the looking sequence, trying to indicate a need to leave the room.

The adult with her tried to redirect her to a play area amongst the fifteen or so other children in the room. The child then sat down on the floor and took off her shoes. This brought an adult in close proximity to assist in putting the shoes back on to resume play. However, with the adult close by, the child had easy access to biting the adult on the hand or arm.

The adult saw this as severe behavior and promptly removed the child from the room to engage in some sensory activity, calm down, put shoes back on and return to the preschool setting, which, by this time, had moved through the schedule to a calmer, more structured activity.

In looking at this sequence of behaviors, it was clear that the child had difficulty with the unstructured free play, and needed a break. After discussion, with the teacher and assistant, it was decided to take the child for a short walk in the school hallway, get a drink of water, and return to the room after the majority of peers had settled into the last few minutes of play. This allowed the child a shorter period of coping with a stressful situation and gave her a chance to be out of the room during the most hectic part of the play activity. It also greatly decreased the need to engage in inappropriate behaviors because the adults identified the communication sequence and purpose of the biting behavior.

Positive and Pro-active Approaches

The Individuals with Disabilities Education Act requires that if a child’s behavior impedes learning, the educational team must consider strategies and supports, including positive behavioral interventions.

These positive behavioral approaches could be implemented and useful in any setting for young children. They are intended to focus on the positive, pro-active approaches that allow the child to be successful in the learning environment. Examples of positive behavioral interventions can include:

- *Changes in the system*, including policies, procedures, staffing, and organization
- *Changes in the environment*, including environmental alterations, schedules and instructional modifications
- *Skill instruction*, including direct instruction to the child and adults working with the child
- *Behavioral consequences*, where negative behaviors are eliminated or minimized and positive, appropriate behaviors are established or increased.

Instructional strategies may consist of:

- using a developmental approach
- teaching new behaviors through a variety of research-based techniques
- decreasing or altering existing behaviors
- using peers as instructors
- implementing a variety of visual strategies
- teaching individually versus in a group setting

Other strategies can include using augmentative and alternative strategies for communication such as the use of picture cards to represent words, voice output devices to assist with communication, or sign language. “The expected outcomes from positive behavioral interventions and supports are increases in positive behavior, decreases in problem behavior, and improvements in life-style” (National Research Council, 2001).

Responding to Sensory Needs

Understanding the Sensory System

Autism is a neurologically based disorder that affects a person’s ability to process information, communicate, and interact with others. The definition of Autism from the Autism Society of America includes abnormal responses to sensations.

Sensory integration affects the way a person . . .

- Responds to various stimuli
- Attends
- Learns
- Relates to the environment
- Perceives and uses her body in space
- Relates to other people

It allows a person . . .

- To concentrate
- To organize
- To show increased learning ability
- Academic learning ability
- A capacity for abstract thought and reasoning
- A specialization of each side of the body and the brain

Any one or a combination of senses or responses can be affected, including sight, hearing, touch, balance, smell, taste, reaction to pain, and the way a child holds her body. The process where the brain sorts and organizes information for appropriate use is the process of sensory integration (Ayres, 1979). It is the ability of the body to receive, organize, interpret, and respond to sensory information received from inside and outside the body.

Signs of Overload

Signs of sensory integration dysfunction or overload in infants and toddlers:

- Difficulty consoling self when upset
- Failure to bring hands together and bang toys
- Slow to roll over, creep, sit, or stand
- Difficulty babbling
- Failure to explore
- Frequent hand fisting after three months of age
- Difficulty tolerating prone position (on stomach)
- Dislikes bath
- Becomes tense when held
- Resists being held or dislikes being cuddled
- Sucking difficulties which make bottle feeding challenging or slow

Signs of sensory integration dysfunction or overload in the preschool child (three to five years of age):

- Clumsy, falls easily
- Difficulty with balance
- Breaks toys easily when playing
- Avoids playing with popular toys intended for their age as they may be too challenging and cause frustration
- Difficulties in learning to tie shoes, ride a bicycle, and zip or button clothes
- Over or under reaction to touch, certain odors, lights, or noises
- Dislikes getting hands dirty or going barefoot in grass or sand
- Difficulty learning how to use playground equipment
- Difficulty with eye-hand coordination activities such as cutting and coloring

Strategies to Increase Readiness Behaviors and Decrease Avoidance and Sensory System Shutdown

There are several intervention strategies that are currently utilized to assist young children with Autism to make sense of the sensory input and messages they receive. Several intervention strategies are briefly described here, and could be recommended for a child and family to be implemented by a specialist or someone trained by the specialist.

Sensory Integration Therapy emphasizes the neurological processing of sensory information as a foundation for higher-level skills. A “sensory diet” is where the environment is filled with sensory activities and opportunities to satisfy the sensory needs of the child. Sensory stimulation can also be incorporated through “deep pressure” by using a weighted vest or blanket or through a brushing-and-joint compression program established and supervised by an occupational therapist.

Auditory Integration Therapy examines “massaging” the middle ear through certain frequencies of music, which, in turn, is reported to reduce a child’s hypersensitivity to sounds and improve the overall ability of the brain to process and make sense of the sounds in the environment.

Vision Therapy includes the use of colored filters, oculomotor exercises, and prism lenses to improve the overall ability of the brain to process and make sense of visual images and how they relate to each other spatially.

“In general, interventions based in natural environments that teach or attempt to change behaviors in the context in which they would typically occur have been found to be most effective” (National Research Council, 2001). Helping children with Autism cope with unusual sensory responses within their ordinary environments, or making modifications to those environments, have been shown to be most effective in working through the sensory integration issues.

“Children with sensory modulation difficulties may not recognize that they perceive sensory stimuli differently from peers or family. They might not be able to identify what is bothering them or when it is time to take a break. However, assisting a child to put the sensory system in a ‘ready state’ for an activity may help prevent the negative behaviors and over-stimulation that is part of the child’s life” (Mills, 2001).

Planning How to Include Each Child in Daily Activities

Defining the Terms.

Looking back to the 1970s, *mainstreaming* was a popular term used to describe the process of bringing a child with a disability into the mainstream of society. Children with disabilities were given opportunities to participate in activities and educational experiences with peers that are developing typically.

In the 1980s, the term *integration* described the services children with disabilities really needed. This meant that, rather than just sharing portions of the day with peers who are developing typically, opportunities were provided throughout the entire day. Integrated child care received more emphasis also, as a natural setting for young children to participate in activities together.

Looking at *inclusion*, in broad terms today, means that young children with disabilities and children who are developing typically participate together in community early childhood and school age programs. When everybody plays, learns, and grows together, and each child is included in every activity, inclusion takes place. “Inclusion is a way of providing services that fit a child’s individual needs, correspond with the wishes of a child’s family, and reflect the unique opportunities that exist within a child’s community” (Wolery & Odom, 2000).

“The practice of inclusion is based on the philosophy that all children have the right to learn and to belong in the mainstream of school and community life” (Burack, Root, & Zigler, 1997).

Successful Inclusion

For a child with a disability to be successfully included into an early childhood or school age setting, an enormous amount of preparation is often required. This may include preparation of other children in the setting, staff training, adaptation of the environment, and possible alterations in the physical setting. Adaptations and modifications to the routine, environment, or activity take daily planning and implementation. Consultation with someone from either the medical or educational field with a background in Autism is helpful as well.

Looking at the Role of Peers in Successful Inclusive Settings

Most people in the educational field agree that children with disabilities can and should be included in natural settings whenever possible. One primary advantage is the access to typical role models and opportunities for social interactions that can be found in most early childhood settings. Peers may be taught strategies to include the child in everyday activities such as getting their friend's attention, sharing a toy or activity and talking with their friend.

However, for some children or for some portions of the day, the inclusive setting might present too much sensory stimuli for the child to handle. A quiet, individualized learning station may need to be set up. Sometimes, young children may need a longer amount of time working on skills in an individual learning setting until those skills are mastered. Once skills are mastered, the child is then able to take those skills back into a larger group activity or use the skills in different settings and with different people.

Overall, there is a general feeling in the field of education that, "educational initiatives should facilitate the child's overall development and aim at allowing the individual to function within as normal an environment as possible" (Burack, Root, & Zigler, 1997).

Summary

This chapter was designed to examine the importance of early identification of Autism Spectrum Disorders in young children. A brief history of Autism and a general overview of characteristics and early indicators were described.

The prevalence of ASD in school-age children shows an overall increase in the identified numbers during each of the past twenty years, while effective identification of young children has lagged, but is improving.

It is crucial for the medical field and those in early childhood care and education to be aware of the early indicators or red flags of Autism Spectrum Disorders in order to locate and initiate appropriate intervention resources.

Parents have expressed a desire to have concerns and information shared with them as early as possible. Discussions with families should be done in a professional and respectful manner, with assistance in locating further screening and/or referral sources.

A variety of effective interventions have proven to assist children develop more appropriate social and communication skills and have allowed young children with ASD to be successfully included in various age-appropriate community options.

Many resources are available both on the web and in print to assist families and early childhood practitioners make wise decisions regarding effective interventions, support, and on-going information.

Key Points

1. Autism is a neurological disorder, considered to be a life-long developmental disability, affecting brain functioning.
2. Autism has an impact on communication, social skills, and behaviors, interests, and activities. Symptoms may range from mild to severe, and may also have an impact on cognitive ability and motor skills.
3. ASD usually occurs within the first three years of life, affecting males more frequently than females.
4. Early childhood practitioners need to build a successful relationship with parents based on trust and communication for each to share concerns about a child's development.
5. Early childhood practitioners are in a unique position to observe and record unusual patterns in children's development, and identify red flags that may indicate ASD.
6. Parents and professionals need to be aware and feel comfortable contacting community resources and support systems for children suspected of or identified with Autism.
7. Early childhood practitioners can and do make a difference in the lives of young children identified with ASD when they assist in earlier identification and provision of appropriate early intervention services.

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