

Lecture 7

Book: Exceptional Children

Chapter 7: Autism Spectrum Disorders

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Summary

According to Leo Kanner (1943) children displayed behavior “so markedly and uniquely from anything reported so far, that each case merits a detailed consideration of its fascinating peculiarities”. The children Kanner described, eight boys and three girls, shared the following characteristics:

- Difficulty relating to others in a typical manner
- Extreme aloneness that seemed to isolate the child from the outside world
- Resistance to being picked up or held by parents
- Significant speech deficits, including mutism and echolalia
- In some cases, exceptional memorization skills
- Early specific food preferences
- Monotonous, obsessive desire for repetition and sameness
- Bizarre, repetitive behavior such as rocking back and forth and spinning objects
- Explosive temper tantrums
- Lack of imagination and few spontaneous behaviors such as typical play
- Normal physical appearance

IDEA Definition of Autism:

(i) Autism means a developmental disability affecting verbal and nonverbal communication and social interaction, generally evident before age three, that adversely affects a child’s educational performance. Other characteristics often associated with autism are engagement in repetitive activities and stereotyped movements, resistance to environmental change or in daily routines, and unusual responses to sensory experiences.

(ii) Autism does not apply if a child’s educational performance is adversely affected primarily because the child has a serious emotional disturbance.

(iii) A child who manifests the characteristics of autism after age three could be identified as having autism.

American Psychiatric Association Definition of Autism Spectrum Disorder: Most children receiving special education under the IDEA disability category of autism have received a diagnosis of one of four related pervasive developmental disorders that constitute the autism spectrum —autistic disorder, Asperger’s disorder, childhood disintegrative disorder, or pervasive developmental disorder not otherwise specified (PDD-NOS)—per criteria published in the American Psychiatric Association’s Diagnostic and Statistical Manual of Mental Disorders (*DSM-IV*) (2000). These related disorders, which constitute the autism spectrum, are differentiated from one another primarily by the age of onset and the severity of various symptoms.

- **Autistic Disorder (Autism)** - Autistic disorder is marked by three defining features with onset before age 3: (a) qualitative impairment of social interaction (e.g., lack of social or emotional reciprocity and affect); (b) qualitative impairment of communication (e.g., delay or total absence of spoken language); and (c) restricted, repetitive, and stereotyped patterns of behavior, interests, and activities (e.g. stereotypic or repetitive speech or motor behavior, excessive adherence to routines, preoccupation with unusual objects). The combination of behavioral deficits (e.g. inability to relate to others, lack of functional language), behavioral excesses (e.g. self-stimulation, bizarre and challenging behaviors), and unusual responses to or interest in sensory aspects of their environment makes children with autism stand out as strikingly different from most children.
- **Asperger’s Disorder:** At the mild end of the autism spectrum is Asperger’s disorder or, more commonly, Asperger syndrome. The most distinctive feature of Asperger syndrome is impairment in social areas, particularly an inability to understand how to interact socially. Deficits in the use of nonverbal behaviors related to social interaction such as eye gaze, facial expression, gestures, body posture, and judging personal space are common. Children with Asperger syndrome do not have general language delay, and most have average or above-average intelligence.
- **Childhood disintegrative disorder:** It shares behavioral characteristics with autistic disorder, but the condition does not begin until after age 2 and sometimes not until the child has reached age 10. Medical complications are common, and the prognosis for significant improvement is usually very poor.
- **Pervasive developmental disorder Not otherwise specified (PDD-NOS):** Children who meet some, but not all, of the qualitative or quantitative criteria for autistic disorder are often diagnosed as having pervasive developmental disorder not otherwise specified (PDD-NOS). Children with PDD-NOS have significant impairments in socialization with difficulties in either communication or restricted interests.

Characteristics:

- **Impaired Social Interactions:** Many children with ASD have difficulty perceiving the emotional state of others, expressing emotions, and forming attachments and relationships. They seldom use social gestures such as showing and pointing things out to others or waving and nodding their head at others. Although some children with ASD

will pull, push, or lead others by the hand to get things they want, the use of these gestures typically lacks any social component; the child seems to be using the other person just as a means to an end.

Communication and Language Deficits: About half of children with autistic disorder are mute; they do not speak, but they may hum or occasionally utter simple sounds. The speech of many who do talk consists largely of echolalia —verbatim repetitions of what people around them have said—and noncontextual speech phrases without any apparent communicative purpose. Echolalia may be immediate or delayed. A common characteristic of children with autism is the concrete or literal processing of verbal information. They understand straightforward cause-and-effect relationships and questions that have a definite answer more easily than they do abstract concepts, idiomatic expressions, or humor.

- **Repetitive, Ritualistic, and Unusual Behavior Patterns:** They may exhibit stereotypy, a pattern of persistent and repetitive behaviors such as rocking their bodies when in a sitting position, twirling around, flapping their hands at the wrists, flicking their fingers, sniffing at the air, or humming a set of three or four notes over and over again. A child may spend hours at a time gazing at his cupped hands, staring at lights, spinning objects, clicking a ballpoint pen, and so on.
- **Insistence on Sameness and Perseveration:** They may insist on having everything in the same place all the time and get very upset if anything is moved. Even slight changes in their routines at home or in the classroom can trigger explosive “meltdowns” in some children. Sometimes a verbal child with autism may show this desire for sameness in a preoccupation with a certain subject or area of interest to the exclusion of all others. This child may talk incessantly about one topic, regardless of how bored his listeners are with it, and show no interest in anything else. He may ask the same question over and over, regardless of the reply.
- **Unusual Responsiveness to Sensory Stimuli:** About 70% to 80% of individuals with autism exhibit abnormal reactions to sensory stimulation. This takes the form of over- and under-responsiveness to sensory stimulation. An overresponsive (hypersensitive) individual may not be able to stand certain sounds, dislike being touched or the feel of certain textures, and refuse to eat foods with certain smells or tastes. An under-responsive (hyposensitive) child appears oblivious to sensory stimulation to which most people react. Some children with autism do not seem to feel pain in a normal way. Some under-responsive children will spin round and round, rock back and forth, or rub and push things hard into their skin, perhaps to create additional forms or higher intensities of stimulation.
- **Intellectual Functioning:** Surveys show that about 70% to 80% of individuals with autistic disorder also meet the diagnostic criteria for intellectual disabilities. About one-half of those individuals function in the severe or profound range of intellectual disabilities. Some professionals use the terms low-functioning autism and high-functioning autism to differentiate individuals with and without intellectual disabilities. Uneven skill development is a common characteristic of ASD, and about 10% to 15% of

children exhibit “splinter skills”—areas of relatively superior performance that are unexpected compared to other domains of functioning. For example, a child may draw very well or remember things that were said a week before but have no functional language and refrain from eye contact. Some experts estimate that 10% of people with autism have savant syndrome, an extraordinary ability or knowledge in a particular area such as memorization, mathematical calculations, drawing, sculpture, or music ability while functioning at the intellectually disabled level in all other areas. Many children with ASD exhibit over-selectivity, the tendency to focus on a minute feature of an object or a person rather than the whole. Obsessive attention on a specific object or activity is another characteristic often seen in individuals with autism spectrum disorder. This focused attention may last for a long time and can be very difficult to break.

- **Problem Behavior:** Often the parents report that the child sometimes bites himself so severely that he bleeds, or that he beats his head against walls or sharp pieces of furniture so forcefully that large lumps rise and his skin turns black and blue. He may beat his face with his fists. Sometimes the child’s aggression will be directed outward against his parents or teachers in the most primitive form of biting, scratching, and kicking. Some of these children absolutely tyrannize their parents by staying awake and making noises all night, tearing curtains off the window, spilling flour in the kitchen, etc. Many individuals with autism experience a variety of sleep problems, such as delayed onset of sleep, brief sleep duration, and night walking. Food and eating problems are also common in children with autism spectrum disorders. Some children have extremely narrow food preferences, often sensory based (e.g., refusing foods with greater texture), some refuse to eat altogether, or choke, gag, and spit out food. Some children with autistic disorder engage in pica, the compulsive, recurrent consumption of nonfood items (e.g., paper, dirt, pebbles, feces, hair).
- **Asperger Syndrome:** While children with Asperger syndrome do not have the deficits in language and overall intellectual functioning typical of children with autistic disorder, they share many characteristics which are as follows:
 - ❖ Intense interest in a particular subject, often atypical things or parts of things (e.g., deep-fat fryers, ZIP codes, washing-machine motors), to the exclusion of everything else
 - ❖ Clumsiness, difficulty with fine- and/or gross-motor activities
 - ❖ Inflexible adherence to routines
 - ❖ Fascination with maps, globes, and routes
 - ❖ Superior rote memory, tendency to amass many related facts
 - ❖ Speech and language impairments in the areas of semantics, pragmatics, and prosody (volume, intonation, inflection, and rhythm); pedantic, odd speech patterns; formal style of speaking
 - ❖ Difficulty understanding others’ feelings
 - ❖ Extensive vocabulary, reading commences at an early age (*hyperlexia*).
 - ❖ Perfectionist, frustrated when asked to submit work they believe is below standard.

- **Positive Attributes and Strengths of Students with ASD:** Not all individuals with ASD are always unattached to those around them or consistently behave in a stilted or inappropriate manner. As Greenspan and Weider (1997) remind us, many children with autism are “quite loving and caring, thoughtful and creative”. For e.g. Lianne Willey (2001), a woman with Asperger syndrome, writes: We can describe a situation like no one else. We can tell you what intangibles feel like and secret flavors taste like. We can describe for you, in unbelievable depth, the intricate details of our favorite obsessions. Encouraging students’ involvement with their special interest areas can lead to positive outcomes and strengths in other areas of functioning.

Causes of Autism: Current biomedical research on the causes of autism pursues one of three theories:

neuropathology, genetic inheritance, and environmental toxins that invade the central nervous system. Recent research shows a clear biological origin for autism in the form of abnormal brain development, structure, and/or neurochemistry. Although the precise neurobiological mechanisms that cause autism have not been discovered, “it is clear that autism reflects the operation of factors in the developing brain” (National Research Council, 2001). Autism clearly has a genetic component; having one child with autism greatly increases the chances of having another child with autism. A recent study found that parents who have a child with autism have a 19% chance overall (26% for males and 9% for females) of having a second child who will also be affected. Although the cause of autism is unknown at this time, research continues to bring us closer to answering that question. Autism might best be viewed as a behavioral syndrome that may be produced by multiple biological causes.

Identification and assessment:

Screening: The American Academy of Pediatrics recommends that all children be screened with a standardized autism-specific screening tool at the 18-month preventive care visit and again at 24 months of age to identify children whose development may have regressed. Some of the screening instruments are :-

- **CHAT - The CHAT (Checklist for autism in toddlers)** identifies children at age 18 months who are at risk for social-communication disorders. It is a short questionnaire with nine items filled out by the parents and five items by a primary health care worker. Any child who fails the CHAT should be rescreened approximately 1 month later. If he fails the CHAT for a second time, the child should be referred to a specialist for a diagnostic evaluation.
- **Modified checklist for autism in toddlers (M CHAT) - The M-CHAT** is an expanded American version of the original CHAT, which was developed in the U.K. Its goal is to improve the sensitivity of the CHAT for an American audience. A child who fails the M-CHAT should be evaluated in more depth by the physician or referred for a developmental evaluation with a specialist.
- **Social Communication Questionnaire:** The SCQ is a 40-item screening tool completed by a parent or other primary caregiver in less than 10 minutes. Although the SCQ was developed for screening children age 4 years and up, a study found that it correctly identified 89% of children ranging in age from 17 to 45 months and made no false-positives.

- Autism Spectrum Screening Questionnaire (ASSQ)- The ASSQ is a 27-item checklist that is completed by parents and teachers when screening symptoms characteristic of Asperger syndrome and other high-functioning ASDs in children.

Educational Approaches:

- **Critical Importance of Early Intensive Behavioral Intervention:** Early intensive behavioral intervention (EIBI) has helped some children with autism learn communication, language, and social skills so that they have been able to succeed in general education classrooms. The work of Lovaas and colleagues was a landmark accomplishment in the education of children with autism (Baer, 2005). First, they discovered and validated at least some of the factors that can be controlled to help children with autism achieve normal functioning in a general education classroom. Second, the dramatic improvements that were previously considered unattainable in the children's social, communication, and cognitive functioning helped spur wide-ranging interest and research funding for a disorder for which custodial care was thought to be the only option (National Institute of Mental Health, 2004). Third, the successful outcomes provided a legitimate basis for hope and encouragement for parents and teachers desperate to learn how to help children with autism.
- **Applied Behavior Analysis:** ABA provides a scientific approach to designing, conducting, and evaluating instruction based on empirically verified principles describing functional relationships between events in the environment and behavior change. ABA uses behavioral principles such as positive reinforcement to teach children skills in a planned, systematic manner. Children receive repeated opportunities to practice and use their new skills across the day, settings, people, and situations.
- **Visual Supports: Helping Students with Autism Cope with Social Situations and Increase Their Independence in the Classroom:** Visual supports encompass a wide variety of interventions that involve visual cues and prompts that help students perform skills with greater independence and accuracy. Picture activity schedules and social stories are two strategies for students with ASD that entail visual supports. Social stories explain social situations and concepts, and the expected behaviors of the people involved, in a format understandable to an individual with ASD. Social stories can answer a child's questions about concepts and provide information about social behavior that she is not likely to ask for or obtain in other ways. Teachers and parents can use social stories to describe a situation and expected behaviors, explain simple steps for achieving certain goals or outcomes, and teach new routines and anticipated actions.

As educational placement alternatives, students are either placed in the general education classroom or resource and special classrooms. The general education classroom is not the least restrictive environment for all students with ASD. Many children at the severe end of the autism spectrum are best served in a setting where they can receive a highly individualized program of intensive, specialized instruction focused on the social/communication, self-control, and independence skills necessary for maximal benefit from placement in a general education classroom. On the other hand, Instruction in a special class or resource room typically features a

high frequency of instructional trials per minute; careful specification of and planning for transferring the control of students' responses from teacher-contrived antecedent and consequent stimuli to naturally occurring events; specific strategies for promoting the generalization of newly learned skills to the regular classroom, the community, and the home; continuous recording of data on each child's performance of targeted skills; and the daily review of those data as the basis for making curricular and instructional decisions.