CHAPTER 1

Historical Perspectives of Autism Spectrum Disorder

Learning Objectives

By reading this chapter, interventionists will be able to:

1. Compare and contrast diagnostic criteria for autism spectrum disorder (ASD) from the fourth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV) to the fifth edition (DSM-V).
2. Identify a reason why girls with autism may be overlooked in comparison to their male counterparts.
3. Define the neurodiversity movement and ableism.
4. Compare the medical and social model of disability.

Before You Begin, Think About These Questions

- What do I know about autism?
- How did I first learn about autism?
- What do I want to know about autism?

While criteria and descriptions have certainly evolved, ASD as we know it today is not vastly different from the way we knew it nearly 100 years ago when a psychiatrist,

Autism Spectrum Disorders from Theory to Practice: Assessment and Intervention Tools Across the Lifespan, First Edition. Edited by Belinda Daughrity and Ashley Wiley Johnson.

Leo Kanner, first wrote about his experiences with children with the disorder, all younger than age 11, beginning in 1938 (Kanner 1943). He published his longitudinal study as his counterpart Hans Asperger was writing of the same phenomenon, hence the former diagnostic term, “Asperger’s Syndrome”. His seminal paper titled “Autistic disturbances of affective contact” described his experiences of 11 cases of children. Similar to the gender disparity we see today, Kanner included more boys than girls in his study.

As Kanner’s study title suggests, the primary impairment of those children was social engagement, as all the children demonstrated deficits in key social domains including functional play skills and reciprocal social interaction. One case describes a child who “always worked and played alone” with “no manifestation of friendliness or interest in persons” and “no display of affection.” The descriptions clearly outline social communication deficits, in spite of typical IQ scores.

Cases often described various restricted and repetitive behaviors, a hallmark feature of ASD. Though written in 1943, descriptions could be included in diagnostic reports of the present day. For example, one case included the descriptions “stereotyped movements,” “repetitions carried out in exactly the same way,” and “verbal rituals,” which all could be used to describe common restricted and repetitive behaviors observed in individuals with ASD today.

What are the diagnostic categories for autism? In past years, a formal diagnosis according to the DSM-IV had to involve three distinct categories:

- Impairments in social interactions
- Impairments in communication
- Restricted, repetitive, and/or stereotyped patterns of behavior
- Interests, and/or activities (Table 1.1).

Each category had to be identified to qualify for a diagnosis. Notably, the social interaction domain had to be identified twice as much as the other two diagnostic domains, highlighting the importance of social interaction deficits in the diagnosis of ASD.

Active Learning Task

Think, Pair, Share

Review Kanner’s 1943 publication. What were some of the descriptions of the cases of ASD in Kanner’s seminal work?

How do those descriptions compare with our current knowledge of ASD?

Beginning in 2013, the DSM-V collapsed the three diagnostic domains to just two domains: (i) deficits in social communication and social interaction, and (ii) restricted, repetitive patterns of behavior, interests, or activities. Essentially, the newest edition collapsed the social interaction and communication impairments into just one domain, rather than two independent categories, while maintaining the criteria for restricted and repetitive behaviors (Figure 1.1).

TABLE 1.1 DSM IV categories used in the formal diagnosis of ASD

Social interaction impairments	Communication impairments	Restricted and repetitive behaviors
• Marked impairment in the use of multiple nonverbal behaviors, such as eye-to-eye gaze, facial expression, body postures, and gestures to regulate social interaction. • Failure to develop peer relationships appropriate to developmental level. • A lack of spontaneous seeking to share enjoyment, interests, or achievements with other people (e.g. by a lack of showing, bringing, or pointing out objects of interest). • Lack of social or emotional reciprocity.	• Delay in, or total lack of, the development of spoken language (not accompanied by an attempt to compensate through alternative modes of communication such as gesture or mime). • In individuals with adequate speech, marked impairment in the ability to initiate or sustain a conversation with others. • Stereotyped and repetitive use of language or idiosyncratic language. • Lack of varied, spontaneous make-believe play or social imitative play appropriate to developmental level.	• Encompassing preoccupation with one or more stereotyped and restricted patterns of interest that is abnormal either in intensity or focus. • Apparently inflexible adherence to specific, nonfunctional routines or rituals. • Stereotyped and repetitive motor mannerisms (e.g. hand or finger flapping or twisting or complex whole-body movements). • Persistent preoccupation with parts of objects.

So why was this change made? Researchers and clinicians alike readily identified social impairments and restricted and repetitive behaviors as defining features of ASD. However, readily identifying communication impairments was a challenging area even for professionals with significant experience with the population, particularly for diagnosing highly verbal individuals with little to no expressive and/or receptive language delays and typical IQ. These highly verbal individuals were often diagnosed with Asperger's, considered a "high-functioning" version of autism. Even more controversial was a diagnosis of pervasive developmental disorder – not otherwise specified (*PDD-NOS*), a label used to describe individuals who may have presented with autism-like symptomology, but not enough characteristics to clearly receive an autism or Asperger's diagnosis.

Essentially, even the most experienced professionals were having difficulty reaching a consensus on these three diagnostic categories, with potential for one individual to receive three different diagnoses if evaluated by three different clinicians. This acknowledgment led to a shift in the perception of diagnosis and the idea of an autism spectrum, rather than a singular diagnosis. In fact, many current clinicians now more commonly use the term ASDs, indicating that autism is not just one single disorder, but actually several different types of disorders, each with a different presentation based upon symptom severity and expression. (Figure 1.1).

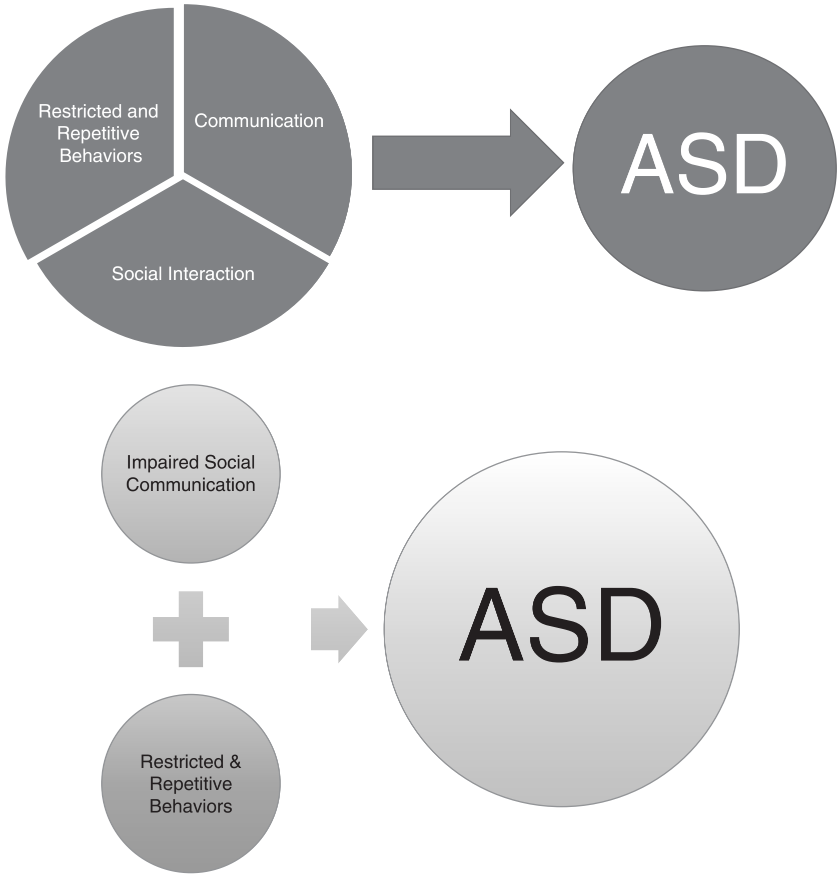

FIGURE 1.1 One domain for autism spectrum disorders.

Why does this matter? As we discuss a bit later, appropriate, differential diagnosis is critical for individuals to be able to access appropriate services and to receive targeted interventions to best address their unique needs. The common refrain from Dr. Shore of: "If you have met one person with autism, then you have met one person with autism" remains accurate due to the vast heterogeneity of ASD. Research scientists in autism work to explore gene mutations in the disorder and recognize the likelihood of several different genetic markers, given the vast differences found in the heterogeneous disorder (Geschwind 2008). Of course, autism is not simply a genetic disorder. If it were, we could clearly test and identify it early on much like we do for other gene mutations, such as Down Syndrome, which we can identify in utero. Complexly, autism is thought to be a combination of pre-existing genetic risk coupled with environmental factors. However, there still exists an element of the unknown that fails to explain the presentation of autism. For example, if there were only genetic and environmental factors, we might expect to see sets of twins both diagnosed and presenting similarly. That is not the case, despite siblings being at higher risk for diagnosis.

One of my most interesting patients was a four-year-old boy with autism who was nonverbal and had significant communication difficulties. He presented with ASD symptomology like hand flapping, difficulty with changes in routine, and significant

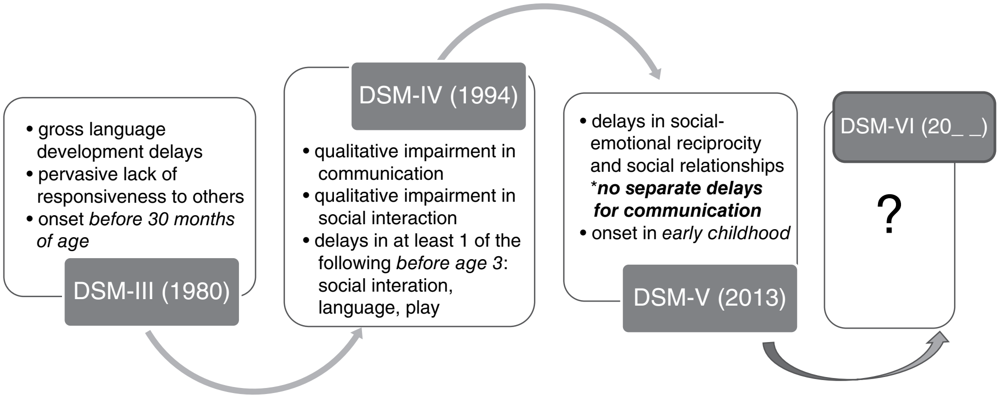

FIGURE 1.2 Changes in the diagnosis of autism in successive editions of the Diagnostic and Statistical Manual of Mental Disorders.

social communication delays. His twin brother was the exact opposite. He was very social and loved to engage in play, often lamenting that he wanted to go to "speech class" because it looked fun and he never got a turn. They were a great example of siblings who shared the same genetic code and gestational environment as identical twins. It could largely be assumed that their environments after birth were also near identical. Yet, they did not both present with autism. The hardest question we are asked by parents is "What causes autism?" It is not hard because we are not well versed in the topic; it is hard because, like most clinicians, researchers, and scientists, it is difficult to say, "We do not completely know."

It is important to consider that diagnostic criteria can change over time, often to create greater specificity and more standards for diagnosticians. Note how the criteria for a diagnosis for autism has changed over the past 40 years (Figure 1.2). Despite changes, note that the key elements remain stable over time: deficits in interaction skills with or without delays in language, and early presentation of delays.

CLINICAL CONSIDERATION

Some clinicians may have a fixed view of restricted and repetitive behaviors, which can prevent appropriate referral and diagnosis. Consider restricted and repetitive behaviors along a continuum that can include restricted and intense interests as well as verbal rituals, in addition to more commonly discernable presentations such as hand flapping. Consider the following examples:

- Lining up toy cars
- Intensely investigating objects at eye level
- Difficulty adjusting to changes in routine
- Insistence on discussing a particular subject with little regard for other topics

- Immediate or delayed echolalia
- Verbal rituals performed with the same script and intonation patterns
- Hand or finger mannerisms.

Active Learning Task

Ask five different people, “What is autism?” Compare their responses. Do your respondents have any personal connections to ASD (do they know a person with autism)? How accurate is their response? What do they think the cause of autism is? Where did they get their information? Based on your findings, how can you go about better educating the general public on autism?

Clinical Anecdote

As a teenager in high school, I worked at a summer camp for children with special needs. One of the campers was a four-year-old boy who I adored. He was very chatty and loved riding bikes. One afternoon, I had him and two other campers in my car to head to a local park for a field trip day. As usual, I had taken a wrong turn and gotten lost (this was pre-GPS, Waze, or Google Maps ☺). I pondered what to do aloud when suddenly my favorite camper in the backseat said, “Turn right on Centinela. Then make a left on Jefferson and a right on Bristol Parkway.” I chuckled, but then realized *that was actually the way to get there*. I mentioned it to his father later that day and his dad replied, “Oh he *loves* maps. He can honestly tell you how to get just about anywhere in the city. He doesn’t play that great with other kids, but he is amazing at directions.” I later learned that the boy was diagnosed with autism. Subsequently, he became my permanent passenger on all camp field trips, with his penchant for maps camouflaging my horrible sense of direction.

A NEURODEVELOPMENTAL DISORDER: AUTISM AND THE BRAIN

Active Learning Task

Recall your studies in neuroanatomy. What are the key areas of the brain for:

- Language?
- Motor functioning?

Although we do not have an exact answer about what causes autism, we do know that individuals with ASD can demonstrate atypical neurological presentations in comparison with their typically developing peers and evidence suggests multiple interacting genetic factors (Muhle et al. 2004). While there is not a single, specific, genetic marker of ASD, evidence indicates that there are several different potentially impacted genes, which supports the theory of there being several autisms.

Research suggest that Purkinje cells, located in the cerebellum and thought to be responsible for motoric inhibition, are limited in individuals with autism (Whitney et al. 2008). Neurological deficits causing motor communication deficits have been explored as a factor for poor speech production in individuals with ASD (Mody and McDougle 2019). Studies indicate abnormal brain growth and enlarged cerebral gray and white matter in toddlers with ASD (Schumann et al. 2010). Further research into white matter indicates that children with ASD may rely more on visuospatial processing networks than their neurotypical peers (Sahyoun et al. 2010). Additionally, research suggests atypical function and organization in brain hemispheres among individuals with ASD, which may contribute to language delays (Kleinhans et al. 2008).

While most parents are less interested in the etiology and more interested in direct supports to promote communicative and social success for their children, it is important for interventionists to at least have an understanding of potential causes for autism. Inevitably, a parent will ask,

What causes autism?
How did this happen?

We should be able to counsel parents with accurate information and with empathy. It is important to note to parents that it is not anyone's fault. Autism is highly heterogeneous and differences in genetic factors and neural circuitry, along with environmental influences, all play a role in autism presentation (Rylaarsdam and Guemez-Gamboa 2019). While we have yet to definitively identify all of the genes involved, research clearly points to the significance of the interaction of both genetic and environmental factors that contributes to autism risk (Chaste and Leboyer 2012).

THE CLINICAL TEAM: WHO AND WHAT

In working with individuals with ASD, it is critical to take a team-based approach to promote holistic care that optimizes clinical strengths to promote achievement of optimal outcomes. The most important members of the treatment team, aside from the individual, are the primary caregivers, such as parents who are the first point of contact. Although there are several interventions available in the treatment of individuals with autism, it should be stressed that primary caregivers spend the most significant amount of time with their children, significantly more than any interventionist. As such, the importance of caregiver education cannot be stressed enough. All interventionists should incorporate caregiver education as a critical component of their intervention so that caregivers can continue to employ successful strategies in the home environment.

Interventionists serve as specialists within their respective domains. While each has a particular area of expertise, interventionists should strive for an interdisciplinary and collaborative approach in order to best treat autism from a holistic perspective. Collaboration is addressed in Chapter 11. The ultimate goal of treatment should be to promote communication and skills that permit the individual to live a fulfilling and independent life Figure 1.3.

Active Learning Task

What Is *Your* Scope of Practice?

Understanding the scope of practice outlined by your national organization is important when working with individuals with autism. The scope of practice tells interventionists what one should and should not be working on in your profession when working with individuals with autism. Using this document, write a one-page reflection on the top three scope of practice areas you found interesting and/or never considered. Discuss these findings with your peers. Below you will find information surrounding scope of practice for specific professions working with individuals with autism. This list includes but is not limited to:

American Speech and Hearing Association	https://www.asha.org/practice-portal/clinical-topics/autism
American Journal of Occupational Therapy	https://ajot.aota.org/article.aspx?articleid=1865177
American Physical Therapy Association	https://www.apta.org/patient-care/evidence-based-practice-resources/clinical-summaries/autism-spectrum-disorder-in-children
American Association of Pediatrics	https://pediatrics.aappublications.org/content/145/1/e20193447
American Psychological Association	https://www.apa.org/topics/autism-spectrum-disorder/diagnosing
Centers for Disease Control and Prevention	https://www.cdc.gov/ncbddd/autism/hcp-dsm.html

Interventionists working with young children are encouraged to work with the end in mind. Be mindful that individuals spend significantly more time as adults than they do as children. Addressing maladaptive behaviors that significantly prevent individuals from learning and engaging with others around them should be targeted early using a direct approach, rather than a “wait and see” method. Developing and fostering unique skills that may be marketable as viable future job skills should be explored long before individuals are preparing to transition out of high school. This point is discussed extensively in Chapter 7.

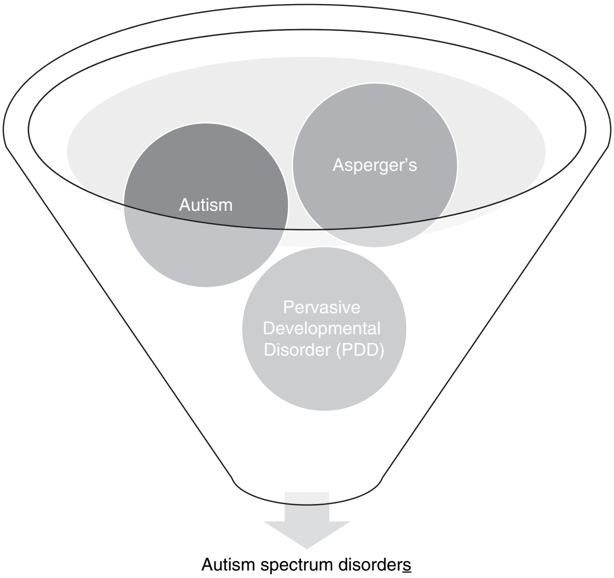

FIGURE 1.3 Autism Spectrum Disorders.

NEURODIVERSITY

In consideration of adults, consideration should be given to self-perception of individuals with autism. The **neurodiversity movement** challenges the deficit-based approached of viewing autism and other neurodevelopmental disorders. Having grown over the last decades, proponents argue that autism is a variation along the spectrum of human differences, aligning autistics to other marginalized cultural groups (Jaarsma and Welin 2012). Scholars acknowledge that disability itself is a socially constructed concept, with the social model of neurodiversity arising as an alternative to the traditional **medical model of disability** (Figure 1.4; Krcek 2013). For a better understanding, see the "Social Model Animation," which can be found on YouTube (Adams-Spink 2011) to help increase understanding about how disability can be framed as a social construct. **Ableism**, which intersects with other systems of oppression, is defined as attitudes that discriminate and devalue people with disabilities; this includes the language we use to describe such individuals (Bottema-Beutel et al. 2021). Interventionists working with individuals with autism and their families should be mindful of the language used to discuss clients and their areas of need, while also considering various perspectives of disability.

Rather than viewing the individual with autism as someone in need of intervention to better adapt to societal conventions, leaders of the neurodiversity movement, such as those with autism and others, implore neurotypical stakeholders to get involved and champion changes that may better accommodate the needs of individuals with autism by normalizing autistic experiences (den Houting 2019). Supporters of this movement champion the rights of individuals with autism to speak for themselves. Additionally, the neurodiversity movement seeks to recognize neurological differences as variances that require more understanding, rather than treatment.

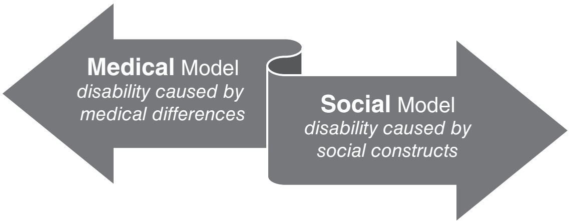

FIGURE 1.4 Medical and social models of autism.

Active Learning Task

Consider the following scenarios through the approach of a medical model vs. that of a neurodiversity paradigm. Discuss how to address these challenges first through a medical lens (What kind of intervention would you employ?) and then through a social lens (What about the environment would you change?).

- John is 13 years old and has significant difficulty in public spaces due to sensory sensitivity to noise, and bright lights.
- Melanie is seven years old and has difficulty attending birthday parties. She loves blowing out candles and tantrums when she is not permitted to blow out the candle at peers' parties.

Importantly, this movement cites the need for individuals with autism to have a central voice in research. For example, in research led by individuals with ASD, Kapp et al. (2019) reframe the perspective of repetitive motor movements as an important adaptation and coping mechanism, rather than as a behavior to be eliminated. Such perspectives are important in considering that many interventions for autism are behavioral; scholars note the controversy between traditional behavioral therapies and the need for a more humanistic approach for interventions for ASD (Shyman 2016).

Highlighted in the movement are notable individuals with autism who have made significant societal contributions such as climate change activist Greta Thunberg, scientist Temple Grandin, and Kent State Division I basketball player Kalin Bennett. Autism itself is viewed as a strength, rather than as a disability. As such, many in this community prefer identity-first language rather than person-first language. This concept is usually the antithesis of what students are taught in schools, as most training programs would advocate for "person with autism," rather than "autistic person" to use person-first language. This difference in wording can be easily addressed by asking clients and their families what language they prefer or listening to how they identify themselves and then using language that respects their choice (Dorsey et al. 2020).

A NOTE ON LANGUAGE

Should I use person with autism or autistic person with my client? – Understand that both parents and clients can become offended if you use language inconsistent with their beliefs and/or self-perception. While many professions advocate person first language, if unsure, *ask your client and use their preferred language*!

Some individuals with ASD who support the neurodiversity movement take issue with groups that support autism research, citing that research funding disproportionately supports efforts to find causes of autism and effective treatments, rather than funding efforts to support individuals themselves to make an active difference in their lives. Currently, much of the public efforts have begun to shift from solely autism awareness to autism acceptance, signaling the change to a more inclusive perspective. As a whole, established researchers have questioned if the neurodiversity movement will shift the full concept of disorders and intervention practices such as in psychiatry and other fields (Baron-Cohen 2017).

Language describing individuals with autism has also changed. In the past, common terms to describe abilities included “low functioning” and “high functioning,” while current practices support describing abilities in reference to support and need such as “high support needs” or “low symptom severity.” Alternatively, some researchers may use “highly verbal” as opposed to “high functioning.” Similarly, many opt for “minimally verbal” instead of “nonverbal” to acknowledge those individuals who might have significantly limited verbal output but who still may present with some kind of verbal productions. Appropriate language is often evolving and interventionists should be mindful of current practices and reflect appropriate trends in light of changing information and preferences.

Additionally, many agencies have moved away from the use of imagery associated with autism, like the puzzle piece, as individuals with ASD have disputed the idea of autism as a puzzle or mystery to be solved rather than a person to be accepted and welcomed. Some current imagery may reflect other images such as an infinity symbol to represent the range of abilities and challenges in autism. Future imagery may consist of something completely different than what we see now. Overall, it is important to consider how our ideas and language about autism have transformed over the years and will likely continue to shift over time.

Research centered on reframing the social deficits in autism focus on evidence cited as the **double empathy problem**, which offers a counternarrative to common theory of mind deficits with findings that autistic people relate to each other much in the same way that neurotypical people relate to each other, despite the difficulty of interrelatedness between the two groups (Milton 2012; Mitchell et al. 2021). This idea presents the concept of autistic people as a minority group deemed “other” by a neurotypical majority. Such perspectives challenge ableist views that serve as the foundation of much of the medical community. Rather than solely considering ableist perspectives, the neurodiversity movement encourages people to consider diversity in social interaction skills rather than a binary right and wrong way of interacting with people. We encourage clinicians to consider this approach as all interventionists continue to evolve our understanding of autism and other neurodevelopmental disorders.

A NOTE ON TERMS

Aspie or Aspergian	This term may be used to refer to individuals formally diagnosed with **Asperger's syndrome**. Although this term is no longer used in current diagnostic criteria as of 2013 in favor of autism spectrum disorders with accompanying levels of severity, many individuals who were first diagnosed with Asperger's Syndrome may still refer to themselves as such.
Autistic	Some clients might prefer **identity-first language** (e.g. autistic person) as opposed to **person-first language** (e.g. person with autism). If unsure, ask your client about their language preferences.
Masking	This term may refer to the **camouflaging** behaviors that some autistic people report doing in an attempt to fit in and/or make their autistic traits less noticeable. Often, clients report this masking behavior is tiring and requires considerable effort.
Neurodivergent	This term may be used to refer to individuals with autism and other disorders, while the term **neurotypical** may be used to refer to individuals without such disorders.
Stimming	This term often refers to **self-stimulatory behaviors** credited as a restricted and/or repetitive behavior in the diagnostic criteria of ASD. Examples may include hand and/or finger mannerisms. Some autistic people report this behavior serves as a calming function to self-soothe when anxious.

One fact that is not lost on us is that individuals with moderate to severe symptomology are not fully represented in the neurodiversity conversation as these clients who continue to struggle with independent communication may very well have their own opinions that remain unknown. However, we applaud the autonomy of individuals with autism having a strong voice in their own care, a right we do not believe that educators or allied health professionals would deny any client. As clinicians, we have received the neurodiversity movement as yet another way of conceptualizing of autism and we support the shift away from the deficit narrative. Emerging research support the concept of celebrating deficits as differences, a perspective that is more welcomed by those who self-identify as autistic as well as those who report familiarity with the neurodiversity movement (Kapp et al. 2013). Some have warned of divisions spurred by the neurodiversity movement between those supporting autistic cultural identify and those with a perspective of the medical model of disability (Baker 2006). As future clinicians working with clients with ASD, we encourage you to consider the needs of your clients and their families, while not being tempted to view your clients from a deficit only approach.

SUMMARY

ASD is a complex neurodevelopmental disorder that centers around social communication challenges and includes the presence of restricted and repetitive behaviors. Causes of autism include genetic and environmental factors, although the complete cause remains unknown. The DSM-IV had three diagnostic domains required to meet diagnostic criteria for diagnosis: restricted and/or repetitive behaviors, communication, and social interaction challenges. The DSM-V reduced the diagnostic criteria to two domains and collapsed the domains of communication and social interaction to form the criteria of social communication. Current views support the idea of several disorder*s* classified as an autism spectrum rather than former separate diagnostic categories such as PDD-NOS and Asperger's. Optimal treatment of ASD includes a collaborative approach between several disciplines with respective expertise. Treatment of ASD should focus on promoting communication and independence. The neurodiversity movement offers a perspective that includes more acceptance of neurological variance. The voices of individuals with autism should be included in their own care. This can be accomplished in part by valuing first-hand accounts, centering the scholarship of researchers with autism, and reconceptualizing the ideas of autism to prioritize strengths of individuals, rather than deficits.

REFLECTIONS ALONG THE PATH

Connie Kasari, Ph.D.

I began working with children with disabilities in the late 1970s/early 1980s. We were just starting to work with severely delayed children, who had limited services and support. I was very involved in Child Find efforts, because at the time, school-aged children with disabilities were not given an opportunity to attend public school programs. That changed in the late 1970s with the passage of PL 94-142 (the Education for All Handicapped Children Act of 1975). Now that all children could gain access to school, we worked hard to locate children, often with the most severe disabilities, and to bring them into school settings. As educators, we also began working with infants and toddlers with disabilities, who previously were only seen by medical professionals. It was an exciting time of developing services for children with disabilities, and connecting families and children to these needed services.

I started out in a metropolitan area in the southern United States, working primarily with low-income, minority families and their severely disabled infants under the age of two years. All of these children and families were amazing, but one child in particular stood out to me. It was a little girl just under two years of age. Her developmental profile was very perplexing. She was not interested in toys or engaging with people. We could teach her something one day, but she would not show the skill again; or she learned something in one setting but could not demonstrate it across settings (like home and school). I now recognize that the child likely had autism, but at the time, I knew very little about this condition. Our team was very unprepared to help this child and her family, and I often think back to her now that we know so much more about interventions for children with autism.

I have spent my career trying to understand the core social communication difficulties of these children, and I have developed interventions to address their needs. Thirty years ago, when I began, three-quarters of children entering kindergarten were minimally verbal; today only about 30% of children remain minimally verbal. The field has made tremendous progress, and yet, we still have much more to learn. Today, I am involved in the combination and sequencing of interventions, to better personalize interventions for individual children. One thing we have learned is that a single intervention is not effective for all children, and that many children will benefit from several different interventions that are more or less intense during different phases of their development.

This recognized heterogeneity in autism also propels us to think about the children who are often left out of research studies, including minimally verbal children, and those with intellectual disability, females, low income, and ethnic-minority children. We need to do a better job of developing interventions that fit their needs. To do this work well, we also need to have a more diversified work force, one that reflects the cultural and linguistic needs of our population. I hope we can attract a broad and diverse new group of therapists who will see the potential in each and every child, and work to systematically personalize effective interventions.

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TEST QUESTIONS

1. According to the DSM-IV, an ASD diagnosis was evaluated by ___ domains.
   A. 2
   B. 3
   C. 4
   D. 5
2. According to the DSM-V, the diagnostic criteria for ASD include the following categories except:
   A. Restricted and repetitive behaviors
   B. Social communication
   C. Social interaction
   D. All of the above
3. According to the DSM-V, an ASD diagnosis includes ___ key domains.
   A. 2
   B. 3
   C. 4
   D. 5
4. Which of the following is true about sex differences in ASD diagnostic rates?
   A. Boys are diagnosed more than girls
   B. Girls are diagnosed more than boys
   C. Boys and girls are diagnosed at the same rate
   D. Gender data about ASD diagnostic rates are unknown

5. Leo Kanner authored his seminal work about ASD in what year?
   A. 1984
   B. 1954
   C. 2002
   D. 1943
6. Restricted and repetitive behaviors may include all of the following except:
   A. Verbal rituals
   B. Difficulty disrupting routines
   C. Self-injury behaviors
   D. Difficulty maintaining eye gaze
7. In the autistic community, some clients may prefer identity-first language (autistic person) as opposed to person-first language (person with autism).
8. ______ are camouflaging behaviors that some autistic individuals may use to better fit in with neurotypical people.
   A. Masking
   B. Stimming
   C. Echolalia
   D. Facial grimaces

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