A Guide to Autism Assessments: Research & Best Practices





The National Institute of Child Health and Human Development defines autism as a complex neurological and developmental disorder that begins early in life and affects how a person acts, learns, and interacts with others. Though autism presents a variety of daily challenges, many autistic people don't see it as an illness or disability, but as a different way of experiencing the world.

One of every 44 children and approximately 2.2% of the adult population in the U.S. are autistic. For many, an accurate diagnosis is empowering: It explains differences and answers questions. Autism evaluations can also inform effective intervention plans and open eligibility for a wide range of supports and services.

Learn more about assessment and screening tools that can enhance your diagnostic process.

Learn more:

How to Choose the Best Autism Assessment for Your Client



Early Childhood Screening

Universal screening and early intervention can lead to greater wellbeing and better outcomes. Screening efforts are improving: The Centers for Disease Control and Prevention (CDC) reports that early identification of autism is four times more likely than it was two decades ago.

Autism screening often takes place during health supervision (well-child) visits. Pediatric health care providers may use developmental milestone checklists like those created by the American Academy of Pediatrics and the CDC. Developmental monitoring can also include:

- conversations with caregivers about their concerns, especially about a child's sensitivities, interactions, responsiveness, or temperamentprioritizes a child's and family's concerns;
- documented developmental, family, and health histories
- awareness of factors that increase or decrease the chances of autism
- a clinician's own observations and findings

Screenings also happen in school settings (including preschools and early intervention programs), usually in response to educators' observations and concerns. Screening test results in these settings aren't diagnostic, but they can prompt additional autism assessments.

If screenings show that a child has developmental delays or is at risk for a disability, it's a good idea to refer parents to the publicly funded early intervention programs in the state where you practice. These programs can provide services such as:

- speech therapy
- occupational therapy
- physical therapy
- hearing and vision care
- assistive technologies

Early intervention specialists will work with each child and family to create an Individualized Family Service Plan (IFSP) with the services each child needs for the best outcomes. As a clinician or educator already in touch with the child, your feedback may be important in creating the IFSP.

The Centers for Disease Control and Prevention maintains a map with contact information for the early intervention services in each state.

Access the infographic here: Early Child Development Stages and Beyond

Selecting a Screening Tool

- In choosing the best screening tool for each situation, you may want to consider questions like these:
- Is the test sensitive: Does it correctly identify autism in most cases?
- Is it specific: Does it rule out autism accurately?
- Is it reliable: If it's repeated, are the results the same?
- Is it valid: Does it accurately measure characteristics of autism?
- Does the test use information from clinical observations or caregiver reports?
- Is the test available in the language needed?
- Is the test written at an accessible reading level?
- Is the test practical, given your setting, time, and budget constraints?

Learn more: How to Interpret Sensitivity and Specificity

Developmental and Autism Screening Tools

Screening tools can be used in a variety of settings, including private practice clinics and early intervention programs. Some are flexible enough to be used in either environment. These are some of the most commonly used tools:

Ages and Stages Questionnaires (ASQ): A general development test that uses parent questionnaires to track motor skills, problem solving, communication, and adaptive skills.

<u>Autism Screening Instrument for Educational Planning</u> (ASIEP-3): A screening tool with five sub-tests designed to identify autism and assist educators in planning and monitoring instructional plans.

<u>Social Communication Questionnaire (SCQ)</u>: A 40 yes-no question screener completed by parents or caregivers, usually in around 10 minutes.

<u>Communication and Symbolic Behavior Scales (CSBS)</u>: A standardized assessment of communication skills completed by caregivers.

Modified Checklist for Autism in Toddlers (M-CHAT): An autismspecific questionnaire that relies on information supplied by caregivers.

<u>Parents' Evaluation of Developmental Status (PEDS)</u>: A screening tool that identifies developmental and behavioral problems using a parent-interview form.

Screening Tool for Autism in Toddlers and Young Children (STAT): An interactive tool that uses activities to assess play, communication, and imitation skills.

Some practitioners may opt for more extensive screening tools that identify developmental delays or possible differences in adaptive functions, such as the Adaptive Behavior Assessment System, Third Edition (ABAS-3) or the Developmental Profile, Fourth Edition (DP-4).



Learn more about screening tools you can use to identify autism.

Diagnosing ASD

No single assessment, however sensitive, is sufficient to diagnose autism on its own. An effective autism evaluation synthesizes information from many sources. It's often the work of a multidisciplinary team of professionals, including physicians, psychologists, speech-language pathologists, occupational therapists, educators, and audiologists—working hand in hand with autistic individuals and caregivers.

What does a comprehensive evaluation include?

The purpose of a comprehensive evaluation is to create the clearest possible picture of the person at the center of it all. Why is a detailed picture so important? Because people can't be reduced to a test score. The individuals at the heart of the evaluation process are complex and ever-changing. Understanding their histories, strengths, and needs enables you to create personalized interventions. Ongoing assessment allows you to adapt those interventions as needs evolve.

Parent- and teacher-completed questionnaires can help to identify differences in:

- language development
- social functioning and communication
- social and self-awareness
- play patterns
- social and emotional skills
- response to sensory experiences

Observations and interviews, including formal assessments, can provide vital insights into behavior in classroom or home environments. They can also shed light on:

- a child's interests
- family dynamics
- emotional functioning
- communication skills
- ability to imagine or pretend
- reading skills
- routines
- strengths, delays, and needs

Cognitive and neuropsychological assessments help clinicians, autistic individuals, and caregivers understand:

- intelligence
- academic achievement
- executive functioning (including working memory, planning, updating, and flexibility)
- attention
- memory
- social cognition
- motor coordination

Speech and language assessments can provide a clearer understanding of:

- how much a child understands
- how much a child can express
- how a child uses language in social interactions
- how a child communicates at home or in school
- how well a child uses grammar
- how well a child can use augmented or alternative communication methods

Adaptive-behavior assessments inform clinicians about a child's ability to carry out practical and social functions independently in day-to-day situations. These assessments measure skills such as:

- self-care activities such as bathing, dressing, and caring for teeth
- preparing and storing food safely
- making friends
- planning and organizing school or work tasks
- adapting to social norms
- managing money
- following rules in different settings

Learn more: Enhancing Your Adaptive Behavior Evaluations

Medical, genetic, and neurologic tests can yield useful information about:

- genetic conditions linked to autism
- family history of autism
- infections, injuries, and chronic conditions that may be contributing to or causing symptoms
- challenges with sleep, eating, and motor functioning
- hearing or vision limitations

Co-morbidity assessments can identify other physical and mental health conditions that often co-occur with autism, including:

- ADHD
- anxiety
- depression
- intellectual disabilities
- sleep disorders
- eating problems

Learn more: Understanding the Complicated Interplay of Autism and ADHD

Every individual won't need every test. The most important assessments for each person will be determined by their characteristics, symptoms, risk factors, current needs, and other considerations you and your team encounter during the evaluation.

Who Can Identify Autism?

An autism evaluation usually involves a multi-disciplinary team of trained professionals, each of whom uses different assessments to create a full picture of an individual's strengths and needs. An autism evaluation could include assessments administered by any of the following health and education professionals:behavior.

When more in-depth evaluations are needed, experts recommend

- child psychologist
- developmental psychologist

- school psychologist
- psychiatrist
- speech-language pathologist
- occupational therapist
- developmental pediatrician
- pediatric neurologist
- neuropsychologist

Autism assessments are designed to be administered and interpreted by trained professionals. To learn more about the recommendations for administering specific assessments, speak with a WPS Assessment Consultant.

Diagnostic Tools

The Centers for Disease Control and Prevention (CDC) estimates that there are 5,437,988 autistic adults in the U.S., along with one in every 44 children. Each individual has a unique array of characteristics, strengths, and needs. The autism assessment you select can provide you with personalized data to inform intervention plans that build on strengths and meet targeted needs.

WPS can help you choose the assessment tools best matched to your needs, whether you are conducting an initial evaluation, measuring progress, or assessing specific skills and behaviors.

Observational Skills

- Autism Diagnostic Observation Schedule, Second Edition (ADOS[®]-2)
- Monteiro Interview Guidelines for Diagnosing the Autism Spectrum, Second Edition (MIGDASTM-2)
- Psychoeducational Profile, Third Edition (PEP-3)

Rating Scales

- Childhood Autism Rating Scale, Second Edition (CARS[®]2-ST and CARS[®]2-HF)
- Social Responsiveness Scale, Second Edition (SRSTM-2)
- Autism Spectrum Rating Scales[™] (ASRS[®])
- Gilliam Autism Rating Scale, Third Edition (GARS-3)

Interviews

- Autism Diagnostic Interview–Revised (ADI[™]-R)
- Monteiro Interview Guidelines for Diagnosing the Autism Spectrum, Second Edition (MIGDAS[™]-2)

WPS offers a wide variety of Autism and ADHD Assessment and Intervention Resources



Challenges in Assessing Autism

Autism is a complex neurodevelopmental condition with effects that vary from person to person. Diagnosis can be challenging, even for experienced clinicians and educators. Here's a look at a few of the factors that can make autism harder to diagnose.

Health conditions with similar presentations

Other health conditions can sometimes present symptoms similar to autism characteristics. For example, Tourette's syndrome can cause tics that look like the repetitive, rhythmic behaviors associated with autism. In addition, some health conditions such as ADHD and developmental language disorder can co-occur with autism, making it hard to determine which condition is causing a behavior.

Varied presentation in young children

Increasingly, autism screening takes place in early childhood, when development is dynamic and children are rapidly changing. A child may show a developmental delay in a diagnostic area which later resolves. A child can also respond differently to assessments given in different settings.

Learn more: Autistic Experience Across the Lifespan

Differences in criteria

In medical or clinical settings, evaluators often rely on the diagnostic criteria outlined in the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5-TR). In educational settings, federal, state, or district diagnostic criteria may be used to determine eligibility for services. When diagnostic criteria vary, evaluation outcomes can be inconsistent.

Evaluator knowledge and experience

The amount of training necessary to administer and interpret assessments varies from test to test. It takes time and practice to develop assessment expertise and to maintain it as tests and methods are updated.

Sex and gender differences

Every individual experiences autism differently. Current data indicates that people assigned male at birth are around four times more likely to be diagnosed with autism than people assigned female. Much of the research on autism involves boys and men, so researchers know less about how autism presents in girls and women—which can lead to missed diagnoses. In addition, autism is 3-6 times more likely among transgender and gender diverse individuals than in the general population. Researchers think rates of undiagnosed autism among transgender and gender diverse people may also be higher.

Health care inequities

Autism occurs in all races, socioeconomic groups, sexes, cultures, and geographic regions. Yet, studies show that White

and higher-income children are diagnosed earlier and more consistently than lower-income, rural, Black, Latinx, and Asian children. Interventions begin later for many children, if they begin at all. The gap in diagnosis and care may be influenced by lack of access or resources, problems in provider-caregiver relationships, and implicit bias during the diagnostic process, among other factors.

How to Talk About Screening and Diagnostic Results

People respond to autism assessment results in different ways. How you communicate about test results and about autism, in general, can shape the experience and position people for better outcomes. Here are a few recommendations to consider:

Be aware of barriers that can keep caregivers from

engaging.

Researchers have identified several factors that can make it harder for parents, families, and caregivers to accept an autism diagnosis and engage in co-creating or following a treatment plan. These barriers include:

- culture
- Ianguage
- mistrust of health care providers
- stress
- stigma
- lack of knowledge about autism
- confusion about how to navigate education or health care systems
- anxiety over the practicalities of supporting an autistic individual

Some caregivers are equipped with the financial resources, time, and social skills needed to advocate for children, while others may not feel as well-equipped. The support and education you and your team provide can be empowering, both in the moments following a diagnosis and moving forward.

Start with strengths.

As you conduct an evaluation, you'll identify areas of strength and skill in addition to areas of deficit or need. You may find it helpful to begin post-assessment conversations by describing positive characteristics. Starting with strengths sets a positive tone and may help autistic individuals and caregivers re-cast their ideas about autism.

In studies, caregivers can readily ascribe many strengths to their autistic children. They may talk about the child's intelligence, creativity, or physical abilities. Many adult autistic individuals say they benefit from the ability to remember, focus intently, and notice details. You may observe other strengths. Sharing valued traits can boost confidence and re-frame diagnostic criteria as advantages rather than limitations.

Use clear, accessible language.

In conversation and documentation, you can aid understanding and boost engagement by:

- speaking and writing in simple, clear language
- using few acronyms
- explaining complex medical and educational terms
- emphasizing key points
- encouraging people to ask questions
- giving step-by-step instructions
- asking questions to ensure everyone understands key messages
- providing different ways to access information (online, in person, via telephone, in an app, in home language)

Emphasize connection.

Many autistic individuals and caregivers understand autism as a positive identity. Even so, some feel isolated following a diagnosis. Providing information about local and online support groups, educational advocates, specialists, therapy options, and community and school services can help people feel supported and connected.

Researchers have found that having useful social supports is associated with:

- less caregiver stress
- greater positive coping strategies
- better adjustment to having an autistic child
- more positive perceptions of the child

Learn more: How to Communicate with Families to Build Engagement, Connection, and Trust.

Best Practices in Autism Assessment

Excellence in assessment is the result of deliberate practice. These time-tested, evidence-based strategies can elevate your assessment expertise.

Build your competence and confidence with the tools.

Assessments, diagnostic criteria, technologies, and evidencebased practices are all updated periodically. Likewise, becoming skilled in assessment is an ongoing process. It's important to take advantage of opportunities to learn more about selecting, administering, scoring, and interpreting different assessments and communicating results effectively.barriers include:

Collaborate with a multidisciplinary evaluation team.

Research shows that autism evaluations carried out by

transdisciplinary teams can decrease wait times, increase clinicians' confidence in their diagnostic decision-making, and improve workload efficiency. Some researchers think a shared model of evaluation may also increase equity, especially when a coordinated-care approach allows a student or client to be seen by multiple providers in a single visit.

Include data from a variety of sources and methods.

Federal law requires educators and clinicians to use data from a variety of sources and approaches when evaluating a student for a disability. It's also important to compare results gathered in different settings. Using a combination of formal and informal observation strategies in varied settings allows you to gather authentic information about what people can do, what supports they might need, what barriers they face, and what strengths can be tapped to improve their outcomes.

Educate yourself on cultural competence.

Cultural competence is a broad and dynamic set of capabilities. Culturally competent clinicians are aware of their own and their clients' cultural identities. They understand how diversity factors can impact testing and results. They know the populations represented in norms for different assessments. They have developed skill in communicating with diverse groups. Cultural competence can be honed through study, interacting with diverse groups, and consulting with experts.

Screen for comorbidities and confounding factors.

An accurate diagnosis is based on a complete picture of the client's medical, developmental, and psychological histories. Autism can co-occur with other health conditions, many of which mirror autism characteristics or complicate diagnosis. Attention-deficit/hyperactivity disorder, intellectual disabilities, developmental language disorders, behavior disorders, vision problems, and hearing problems can all make it harder to determine if a difference, deficit, or difficulty stems from ASD or from another condition. Identifying and treating any comorbidities can improve outcomes across the board.

Protect sensitive information and data.

Protecting your client's health information and testing data is a legal responsibility and is central to client-clinician trust. As telehealth and online assessments become more common, it's increasingly important to partner with educational and psychological assessment publishers who have invested in security that meets or exceeds federal, state, and local data protection requirements.

Learn more about the WPS commitment to data protection: How WPS Protects Protected Health Information and Your Data.

Comorbidities

Autism often co-occurs with other health conditions. To foster well-being and improve daily life for autistic individuals,

it's important to understand and treat any other medical, developmental, or psychological conditions that may be present. Several medical conditions are more common among autistic individuals, including:

- gastrointestinal problems
- eczema and other skin conditions
- asthma
- food allergies
- headaches
- ear infections
- sleep disturbances
- feeding disorders
- epilepsy
- genetic disorders such as Fragile X syndrome
- frequent accidents and injuries

Several developmental and psychological conditions can also co-occur with autism, such as:

- attention-deficit/hyperactivity disorder
- anxiety
- depression
- intellectual disability
- specific learning disorders

Being aware of frequent co-morbidities can enable clinicians and educators to better support autistic individuals and caregivers.

Strategies to Reduce Bias in Autism Assessments

Implicit bias in autism assessment contributes to disparities in both health care and education. To ensure that all autistic individuals benefit from early diagnosis and intervention, it's important to address subtle and overt biases during diagnostic evaluations.

Know your assessments.

The American Psychological Association recommends that clinicians use care in selecting the right assessment for each individual, taking special care with diverse, underrepresented, and vulnerable populations. The APA encourages clinicians to "consider the unique issues that may arise when test instruments and assessment approaches designed for specific populations are used with diverse populations." Many standardized tests are linked to norms embedded in specific, often Western, cultures. Understanding as much as possible about the assessment and your client's background can help you make a suitable match.

Be aware of implicit racial bias when evaluating behavior.

Race can influence how we view and explain other people's

behavior. For example, in one recent study, college students were asked to decide whether children had Conduct Disorder or Autism. People who identified as White tended to associate White children with autism and Black children with Conduct Disorder. The opposite happened with Black study participants. Inaccurate associations can lead to misdiagnoses.

Identify your risk factors.

Certain situations can increase the likelihood that your decision-

making will be influenced by biases or stereotypes. Researchers have found that people are more susceptible to bias when they are:

- very emotional
- in vague or ambiguous situations
- distracted
- under pressure
- unlikely to receive feedback or be held accountable

Seek out training on implicit bias.

Understanding and correcting your biases is a professional responsibility. Learning about common stereotypes, biases, and stigmas—and the damage they cause—can make you better at spotting them. Look for training that provides evidence-based strategies for addressing implicit bias in your profession. It's also a good idea to participate in diversity, equity, and inclusion initiatives to deepen your understanding and empathy.

Think slowly and deliberately.

Implicit bias is more likely when you resort to "automatic" thinking. When you slow down the diagnostic process, reflect on your work, and use deliberate decision aids to guide the process, you can work to subvert stereotypes and assumptions.

Broaden your intergroup connections.

Seek out positive interactions and connections with people in other groups. New experiences and new knowledge can make you more aware of biases and inspire you to revise them.

Analyze data.

Document the outcomes of your evaluations and notice what patterns emerge. Are many more boys being identified than girls? Are many more White students being identified than Black, Asian, or Latinx students? If disparities exist, can you identify any practices or policies that may be contributing to the different rates of identification? It's important to establish review processes so all the members of your team can analyze data over time. Working to eliminate bias is hard work, so it's important to create an environment where people feel safe talking about these important issues.

Learn about our DE&I commitment: How WPS is Building Greater Diversity, Equity, and Inclusion.

Research

WPS offers a wide range of training and continuing education opportunities for individuals, schools, and practices. They are available both in-person and online to make it easier to develop your assessment expertise.

WPS is collecting data as we standardize and revise assessments. If you and your team are interested in participating in test administration data collection, we'd like to partner with you. Assisting with data collection is a good way to earn money or materials for your team. If you'd like to speak with us about this opportunity, contact research@wpspublish.com or visit our Data Collection page.

Autism and ADHD Related Blogs and Research

- In-Depth Guide: Autism and ADHD
- Blog: Understanding the Complicated Interplay of Autism and ADHD
- Blog: How Autism and ADHD Can Disrupt Interoception
- Blog: How to Choose the Best Autism Assessment for Your Client
- Blog: Best Practices in Autism Assessment
- Video: Autism Conversations: Individualizing Educational Interventions with the MIGDAS-2 Evaluation Process
- Video: How Cyberbullying Impacts Students On and Off the Autism Spectrum
- Video: Autism Spectrum Brains 'Get Energy' from These Things

Resources