Standardized cognitive testing is a complicated subject when it comes to assessing children with autism spectrum disorder (ASD). Their social, communication, sensory and behavior problems compound the difficulties in administering a standardized measure.

The tests rely heavily on the subject’s language skills, ability to interact with others, motor planning and execution, and behavioral regulation. Typically, the assessor is a person the child does not work with or know. As a child with autism tends to thrive on the familiar and predictable, the novelty of the testing situation may create anxiety and significantly compromise the results.

The first modern IQ test was developed by a French psychologist, Alfred Binet, in the early 1900s with the purpose of identifying children who needed special education support.
Standardized testing became a common practice in identifying individuals with mental impairment. The heavy reliance on a single IQ quotient to determine one’s true potential continues to be a controversial topic in the scientific literature.

Individuals possess many different types of intelligence, some of which are not measurable or quantifiable. Standardized IQ testing utilizing common tools such as the Wechsler scales or Stanford-Binet, may be a good predictor of academic success in more typical learners. This type of measurable intelligence assesses a person’s ability to solve novel problems, think abstractly, plan, reason and learn from their environment. The validity and reliability of these measures to predict academic outcomes are less clear in individuals with autism.

In addition to IQ measures, a determination of intellectual disability always includes assessing a person’s adaptive functioning or skills necessary to function in everyday life, such as communication, social skills, personal care, and overall independence. Oftentimes, individuals with autism, including those who attain high scores on the cognitive measures, experience significant deficits in adaptive functioning. For example, a person with a high IQ score on a standardized measure may struggle with day to day activities, such as personal hygiene, interpersonal skills, or balancing a checkbook and meal preparation.

The commonly used labels of “high functioning” and “low functioning” may be misleading and confusing for that very reason. An average to above average IQ score does not encompass the global functioning or reflect some of the daily struggles of the “high functioning” autists, who may have difficulty holding on to a job, paying bills, or establishing and maintaining interpersonal relationships. Similarly, nonverbal children with autism may not have the means to express what they know and end up with the label of “low functioning.”

Historically, there has been an increase in IQs reported by researchers in individuals with autism. This trend appears to be due to better measures and understanding of the confounding factors that interfere with the actual test taking. The difficulties associated with autism include communication and social deficits in addition to repetitive and stereotyped patterns of behaviors, interests, and activities.

These characteristics of autism influence not only the IQ score, but also the person’s ability to participate in the standardized assessment. Up until late 1990s, the research indicated that only about one-fifth of autists functioned in the “normal range” of intelligence.
A more recent study conducted in the US in 2014 indicated that less than a third of the children with ASD had a comorbid intellectual disability.

In a landmark study conducted by Dr. Laurent Mottron and associates, individuals with autism were assessed using two measures of intelligence, The Wechsler Intelligence Scale for Children-Third Edition and Raven’s Progressive Matrices. The children with autism scored on the average 30 points higher on the Raven’s Matrices than on the Wechsler scale, whereas the typical children attained similar scores on both measures. The study replicated with autistic and non-autistic adults yielded similar findings.

The data addresses not only the level but also the nature of autistic intelligence. The Raven’s Progressive Matrices measures ‘fluid intelligence’-the ability to think and reason abstractly and solve problems that are considered independent of learning, experience, and education. The study questions the assumption of a “simple autistic intelligence” that used to dominate the scientific literature.

In my experience as a school psychologist, I have assessed many students with autism utilizing both verbal and nonverbal measures of intelligence. I have found that many students’ IQ scores change with their age. Typically, they attain higher scores as they get older. Some of the changes may be due to their progress in language, social and even test taking skills due to the interventions provided and time spent in school. I have found that in some instances, IQ scores are not always accurate predictors of academic functioning in students with ASD. Some of the students function better academically than what the IQ scores would predict.

The standardized IQ measures appear especially inaccurate in assessing students with major language challenges. Even when being administered the nonverbal tests of intelligence, many of these children experience discomfort, confusion, anxiety, motor planning, and sensory challenges. Typically, these students perform better with familiar adults, in a sensory-friendly environment, and when working for incentives.

Oftentimes, anecdotal data including observations, teacher and parent input, and actual classroom performance may provide a more accurate estimate of ability than standardized testing. It is important to understand the child's growth over time versus using statistical comparisons to the typically developing peers. Youngsters with autism tend to follow their own developmental trajectories that do not reflect the typical development.
Addressing these students’ communication needs and providing access to a robust language system needs to become the top priority.

The scientific literature on the topic of measuring intelligence in autism, including the most recent studies, questions many stereotypes and assumptions that undermine the often hidden and not easily measurable potential in individuals with ASD. Standardized measures of intelligence so commonly used in the schools and by the private practitioners, may have undesirable and unintended outcomes for children with ASD, including underestimates of ability. The inaccurate estimate of learning potential can lead to low expectations or inappropriate educational placement of students.

The results of any standardized assessment with this population of learners need to be interpreted with caution so that they do not hinder access to appropriate educational opportunities. An IQ measure in and of itself should never be used alone in assessing overall ability or in the educational planning. Information and data need to be collected over time, from different sources, and across different environments and include informal data such as observations in different settings, information from parents and providers, and informal and functional assessments of what the child demonstrates in his/her day to day functioning.

The objective of any evaluation process is to gain helpful, valid and reliable information and glean a better understanding of an individual’s current needs, strengths, and challenges. The professionals, educators and parents need to be aware of the limitations of the standardized IQ testing in individuals with ASD. A low IQ score that could be invalid should never become an obstacle to a child’s educational prospects, lower the bar of expectations, or limit the child’s access to appropriate opportunities. Everyone responsible for educating students with autism needs to presume competence, raise the bar high, and provide appropriate supports to enable the students to reach their full potential.

This article has been reprinted courtesy of Autism Parenting Magazine.
A psychological assessment is outlined in the Michigan Administrative Rules for Special Education as part of the process to determine special education eligibility, a requirement for children to receive special education programs and services in school. The results of psychological testing are used to analyze a child’s strengths and weaknesses in ability when planning for appropriate programs and services.

In Dr. Omahen’s article, she reports that the testing situation can often create an atmosphere where the child may experience “…discomfort, confusion, anxiety, motor planning and sensory challenges.” The following are ways you can prepare your child for a “psychological assessment” so that they can perform to the best of their ability with minimum negative impact:

- Be honest, let the child know they are going to go with a psychologist to do some work.
- Talk to your child about the psychologist, who they are, their name.
- Ask the psychologist to meet with your child prior to the testing and perhaps engage with them in some enjoyable activity so that the child may feel more comfortable during the test.
- Do not use the word “test” as it has a negative impact.
- Do not say they will have fun, that it will be easy.
- Tell them what types of activities they may be doing with the psychologist: answering questions, listening, talking, remembering things; they may also be working with blocks and puzzles.
- Ask that the test session(s) be scheduled, if possible, during the time of day when your child functions best.
- Share with the psychologist what helps make your child feel calm and at ease.
- Share with the psychologist any incentives that your child may enjoy.
- Stay away from on-line IQ tests or test preparation sites so that the test results may accurately reflect your child’s strengths and weaknesses in ability and performance; this will help enable the team to develop an appropriate and effective educational plan for programs and services.
### SEPTEMBER AT A GLANCE

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<td>2019 Family Days presented by AAoM (Royal Oak)</td>
<td>Sensory Friendly Planetarium Shows (Jackson)</td>
<td>Self Determination Training (Sterling Heights)</td>
<td>Grand Rounds - Tanja Jovanovic, Ph.D. (Ann Arbor)</td>
<td>Adventures in Parenting (Clinton Twp)</td>
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<td>Understanding the IEP (Traverse City) Transportation Focus Group (Grand Rapids)</td>
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<td>Camp Fish Tales Respite Weekend (Pinconning)</td>
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<td>22</td>
<td>ACEing Autism (Novi)</td>
<td>2019 Family Days presented by AAoM (Royal Oak)</td>
<td>2019 Golf for Autism (Clarkston)</td>
<td>26th Annual Recipient Rights Conference (Battle Creek)</td>
<td>26th Annual Recipient Rights Conference (Battle Creek)</td>
<td>FREE Independent Living Training (Sterling Heights)</td>
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<td>FREE Family Fun Night (Detroit)</td>
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** For more information on any of these events, please contact the MiNavigator line at 877-463-2266.

### 2019 NAVIGATING AUTISM TODAY REGIONAL CONFERENCE

**Friday, October 25th, 2019 | 10:00AM-3:00PM | The MTG Space | 4039 Legacy Pkwy, Lansing, MI, 48911**

Register for FREE at AAoMConference.org

For More Information Please Visit AAoMI.org