

# Case study of a young boy with autism



**ASSIGN  
BUSTER**

Ivan is a 7-year-old boy that requires an assessment concerning developmental problems. Specifically, we are to evaluate his cognitive, language, and behavioral abilities. His speech problems have led some to suspect he suffers from some form of autism.

Ivan was adopted when he was 5 years-old by Basenji by Major Anthony Nelson and Jeannie Nelson. For the last two years Ivan's parents have become increasingly frustrated at their inability to teach their son to speak English. His receptive language ability was reported to be developing. However, his ability to speak English is limited. The parents recently placed Ivan in public school because they did not feel like their home environment was producing sufficient gains.

Although autism is typically identified before the age of five, in the case of Ivan (7 years-old) this is not unexpected (Volker, 2008). The foster home environment is often unstable and children with developmental problems are not diagnosed until symptoms become extreme.

When evaluating children for autism, there are a number of dimensions that need to be looked at. Autism requires a professional from the medical field, psychological, and an audiologist (Volker, 2008). For the sake of this case I will address only the psychological dimension. After this assessment it will be necessary to visit an audiologist to evaluate Ivan's hearing and a medical doctor to do body measurements (head circumference growth curve, etc.) and, if necessary, to look for genetic factors (Volker, 2008).

For diagnosing autism it is important to rule out and discriminate from other possible disorders. With this in mind, I would suggest that Ivan and his

parents are evaluated using the Autism Diagnostic Interview-Revised (ADI-R) in combination with the Autism Diagnostic Observation Schedule (ADOS; Rutter, 2003). These 2 instruments are the most commonly used tool to diagnosis children with an autistic disorder, autism spectrum disorder, Asperger's disorder, and Pervasive Developmental Disorders (Volker, 2008). Much of the psychological community believes that these 2 instruments are the 'gold standard' for autism assessment. This combination will provide complex, but pragmatically useful results. Both tests were specifically created to provide output that categorically matches the Diagnostic and Statistical Manual of Mental Disorders – Fourth Edition (Santangelo & Tsatsanis, 2005).

The Autism Diagnostic Interview-Revised is typically administered first. This way if any anomalies exist that the evaluator needs to look for, they will be cognizant of this before the ADOS. The ADI-R requires 1 ½ to 3 hours to administer (Rutter, Couteur, & Lord, 2003). The length will depend on the complexity of Ivan's problematic behavior, and the ability of the parent to efficiently provide answers to the 93 questions (Rutter, Couteur, & Lord, 2003).

The ADI-R is a great tool that aids professionals in distinguishing children with language delays and mental retardation, from children suffering from a form of autism. These disorders can be easily confused and misdiagnosed without proper assessment.

The ADI-R is administered to the child's parents or caregiver (Rutter, Couteur, & Lord, 2003). In this case, it might be best for both Anthony and

Jeannie to be present for this. The test is a semistructured interview, meaning that questions are meant to be answered as concise as possible. However, if the parents feel the need to clarify something, they are free to do so. It is important that questions are answered only by a caregiver that has spent significant time with the patient. Due to the nature of Major Anthony's job, it could be that he does not spend much time with Ivan. If this is the case, he is encouraged to attend the administration of the ADI-R and only provide answers for behavior that he has personally witnessed on several occasions.

The ADI-R will specifically address questions regarding Ivan's repetitive, social, and play behaviors (Rutter, Le Couteur, & Lord, 2003). Additionally it will address Ivan's early life development, language and communication ability, and social development. It will also provide results concerning his areas of strength and weakness.

The scores that will be obtained through the administration of the ADI-R, are then placed into a program designed to calculate diagnostic features using a complex algorithmic formula (Rutter, Couteur, & Lord, 2003). The output can then be used to compare Ivan's score with certain cutoff scores concerning several dimensions of behavior (Rutter, Couteur, & Lord, 2003). Dimensions such as communication or early developmental delay will be flagged as diagnostically significant if Ivan's score reaches the established cutoff (Rutter, Couteur, & Lord, 2003). These dimensions are all based on the DSM-IV and should provide useful data for the evaluation.

The impressive ADI-R psychometric properties are the reason that it is considered the 'gold standard' for autism assessment (Volker & Lopata, 2008). For autism, and numerous other mental disorders, interview assessments do not provide robust interrater reliability. However, the ADI-R has great interrater reliability. This is evidenced by the fact that the ADI-R has an autism diagnosis interrater agreement of 96% (Volker & Lopata, 2008). This suggests that 96 out of 100 evaluators will arrive at the same conclusion when using this tool on the same individual. The ADI-R is also accurate at discriminating autism from other development and intellectual disorders. For children without autism the ADI-R has an interrater reliability of 92% (Volker & Lopata, 2008). Both of these figures are well above the typical standards for interrater reliability for the disorders being addressed in this case. For the domains present on the ADI-R, it achieves an intraclass correlation of .93 to .97 (Volker & Lopata, 2008). This suggests that the tool has a high amount of internal consistency for each domain assessed. However, the ADI-R is not sufficient, in and of itself, for a valid diagnosis of autism (Volker & Lopata, 2008).

The second tool requires direct observation of the individual being assessed. The Autism Diagnostic Observation Schedule, or ADOS, is a behavior observation technique that has been standardized using a specific coding system. This test typically takes 35 to 45 minutes to complete (Lord et al., 1999). The examiner will engage the child with specific activities that are meant to produce behaviors that are being evaluated. When the examiner is finished observing and coding the child's behavior, he or she will place the output into a diagnostic algorithm (Volker & Lopata, 2008). This will provide

the evaluator with scores that can be compared to cutoff scores. These scores will provide insight into Ivan's abilities in the social & communication domain, as well as provide a combined score.

The ADOS has robust psychometric properties. Lord and colleagues found that the test has an internal consistency ranging from .91 to .94 (1999). Again, these results are impressive, and thus explain why this test is a 'gold standard'. The sensitivity of the ADOS to discriminate is equally impressive: Autism from PDD-NOS combined and non autism spectrum disorders = .90 to .97 (Lord et al., 1999). It was found that the ADOS has a specificity sensitivity of .87 to .94 (Lord et al., 1999).

I believe the ADI-R and ADOS are the best currently available measurement tools that would be effective, and accurate, in the case of Ivan. The lack of information we have concerning Ivan from birth to 5 years-old should not effect the ability of these tools to accurately assess him (Santangelo & Tsatsanis, 2005). With this combination of parental interview and direct behavior observation, an accurate diagnosis can be achieved without the need of extensive/long-term evaluation, nor investigation of his development prior to 5 years-old.