Motor Assessment

Overview of Instruments

Motor assessments have not been developed specifically for use with students with autism spectrum disorder (ASD); however, a variety of instruments are available that may be useful when assessing the motor performance of these students. Because it appears that motor problems are inherent in autism spectrum disorder (cf. Aspy & Grossman, 2011; Nayate, Bradshaw, & Rinehart, 2005; Ozonoff et al., 2008), a motor assessment is important to understanding the complex needs of an individual on the spectrum.

The School Function Assessment (SFA; Coster, Deeney, Haltiwanger, & Haley, 1998) and the Pediatric Evaluation of Disabilities Inventory (PEDI; Haley, Coster, Ludlow, Haltiwanger, & Andrellos, 1992) are criterion-based assessments that measure the functional performance of a variety of motor activities. Both tools benefit from the input of more than one professional. They help identify the functional strengths and limitations of a particular student and can help identify areas for program planning. In addition, many standardized, norm-based motor assessments, including the 11 reviewed here, can be used to assess fine- and gross-motor skills, visual motor skills, and handwriting.

The motor assessments in this TARGET section include the following:

- Beery-Buktenica Developmental Test of Visual-Motor Integration – Sixth Edition (Beery VMI)
- Bruininks-Oseretsky Test of Motor Proficiency – Second Edition (BOT-2)
- Clinical Observation of Motor and Postural Skills – Second Edition (COMPS)
- Evaluation Tool of Children’s Handwriting (ETCH)
- Minnesota Handwriting Assessment (MHA)
- Movement Assessment Battery for Children – Second Edition (Movement ABC-2)
- Peabody Developmental Motor Scales – Second Edition (PDMS-2)
- Pediatric Evaluation of Disability Inventory (PEDI)
- Quick Neurological Screening Test-II (QNST-III)
- School Function Assessment (SFA)
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- Test of Handwriting Skills – Revised (THS-R)
- Wide Range Assessment of Visual Motor Abilities (WRAVMA)

### Misconceptions

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<th>Myth</th>
<th>Reality</th>
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<td>Occupational therapists are not necessary/essential members of autism evaluation teams.</td>
<td>According the DSM-5, sensory differences are now included as a core characteristic of ASD (American Psychiatric Association, 2013). Sensory differences have long been included in the IDEA and state definitions of Autism or Other or Pervasive Developmental Disorders. Motor skills deficits are an associated feature of autism spectrum disorder. Both motor and sensory differences impact functioning at a very basic level. Occupational therapists have unique training necessary for evaluation of and treatment planning for motor and sensory issues (cf. Aspy &amp; Grossman, 2011; Baranek, 2002; Baranek, Parham, &amp; Bodfish, 2005; Nayate, Bradshaw, &amp; Rinehart, 2005; Ozonoff, et al., 2008; Scaaf &amp; Miller, 2005).</td>
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<td>Only children with handwriting challenges require assessment and intervention from an occupational therapist.</td>
<td>Occupational therapists are trained to evaluate and treat a range of areas, including activities of daily living, education, leisure, play, social participation, and work. For children with autism spectrum disorder, any of these may be impacted and, therefore, warrant assessment by an occupational therapist (American Occupational Therapy Association, 2002).</td>
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<td>Because they cannot follow directions and sustain attention for long, children with autism cannot be tested using standardized motor assessments. Therapists can only use observation and interviews to assess motor skill performance.</td>
<td>Children with autism spectrum disorder are unique individuals and have a wide range of abilities to follow directions and sustain attention; therefore, judgments about the use of standardized motor instruments should be made on an individual basis.</td>
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<td>Motor skills are a relative strength for children with autism compared to other areas; therefore, motor skills do not need to be assessed.</td>
<td>Because it appears that motor problems are inherent in autism (cf. Aspy &amp; Grossman, 2011; Nayate, Bradshaw, &amp; Rinehart, 2005; Ozonoff et al., 2008), a motor assessment is important to understanding the complex needs of an individual on the spectrum.</td>
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Resources and Materials
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Children with autism were impaired in motor skills.

This study compared levels of gross- and fine-motor development in children with autism and compared them to those of children with developmental delay and children with no autism. Results showed that the motor skills of children with autism were similar to those with DD.

Results of this study showed that all boys with autism had more difficulty imitating non-meaningful gestures than meaningful gestures compared with non-autistic boys.

Data showed that while quantity of writing was similar, quality of writing was not as good for students with Asperger Syndrome.