# Other Developmental Screening Tools

## Choices for Practices and Providers

**August 19, 2008**

### Social-Emotional and Behavioral Screening Tools

<table>
<thead>
<tr>
<th>Name of Tool</th>
<th>Description of the Tool</th>
<th>Age Range</th>
<th>Adminstration Time</th>
<th>Accuracy* &amp; Psychometric Properties</th>
<th>Available Languages</th>
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<tr>
<td><strong>ASQ-SE - Ages &amp; Stages</strong>  &lt;br&gt; Questionnaires: Social-Emotional - Parental-report about a child's social and emotional behavior</td>
<td>8 color-coded age-specific questionnaires that screen for personal and social skills, including self regulation, compliance, communication, adaptive functioning, autonomy, affect, and interaction with people. Questionnaires contain 22-36 items (answered most of the time, sometimes, rarely or never).</td>
<td>6 to 60 months</td>
<td>10-20 minutes + 1-3 minutes to score</td>
<td>Reliability is 0.94. Validity is 0.75-0.89. Investigated with more than 3,000 children (and their families) across age intervals.</td>
<td>English and Spanish</td>
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### Autism Screening Tools

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<tr>
<td><strong>M-CHAT +A2tdied Cheklist for Autism in Toddlers - Parent-completed questionnaire</strong></td>
<td>Questionnaire designed to identify children at risk of autism from the general population.</td>
<td>16-48 months</td>
<td>5-10 minutes</td>
<td>Sensitivity: 0.85-0.87 (moderate); Specificity: 0.93-0.99 (high). Standardization sample included 1,293 children screened, 58 evaluated, and 39 diagnosed with an autistic spectrum disorder; validated using ADI-R, ADOS-G, CARS, DSM-IV.</td>
<td>English, Spanish, Turkish, Chinese, and Japanese</td>
</tr>
<tr>
<td><strong>PDDST-II - Pervasive Developmental Disorders Screening Test-II, Stage 1: Primary Care Screener - Parent-completed questionnaire</strong></td>
<td>Questionnaire designed to identify children at risk of autism and pervasive developmental disorders from the general population.</td>
<td>12-48 months</td>
<td>10-15 minutes to complete; 5 minutes to score</td>
<td>No sensitivity/specificity data reported for screening of an unselected sample; sensitivity: 0.85-0.92 (moderate to high); specificity: 0.71-0.91 (moderate to high). Validated using extensive multimethod diagnostic evaluations on 681 children at risk of autistic spectrum disorders and 256 children with mild-to-moderate other developmental disorders.</td>
<td>English</td>
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<tr>
<td><strong>STAT - Screening Tool for Autism in Two-Year-Olds - Directly administered tool</strong></td>
<td>Designed as second-level screen to detect children with autism from other developmental disorders. Assesses behaviors in 4 social-communicative domains: play, requesting, directing attention, and motor imitation.</td>
<td>24-35 months</td>
<td>20 minutes</td>
<td>Sensitivity: 0.83-0.92 (moderate to high); specificity: 0.85-0.86 (moderate). Two samples were used: for development phase, 3 children with autism, 33 without autism; for validation sample, 12 children with autism, 21 without autism; validated using CARS, ADOS-G, and DSM-IV criteria; second-level screen; requires training workshop before administration.</td>
<td>English</td>
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Note: Additional screening tools for social & emotional issues should be added to reflect the recommendations of the Mental Health Toolkit, being developed by the American Academy of Pediatric Health Task Force, expected by early 2009.
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<td><strong>SCQ</strong> - Social Communication Questionnaire (formerly Autism Screening Questionnaire-ASQ) - Parent-completed questionnaire</td>
<td>Designed to identify children at risk of autistic spectrum disorders from the general population. Based on items in the ADI-R.</td>
<td>≥4years</td>
<td>5-10 minutes</td>
<td>Sensitivity: 0.85 (moderate); specificity: 0.75 (moderate). Validated using the ADI-R and DSM-IV on 200 subjects (160 with pervasive developmental disorder, 40 without pervasive developmental disorder); for use in children with mental age of at least 2 years and chronologic age ≥4 years; available in 2 forms: lifetime and current.</td>
<td>English and Spanish</td>
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<tr>
<td><strong>CSBS-DP</strong> - Communication and Symbolic Behavior Scales-Developmental Profile: Infant Toddler Checklist - Parent-completed screening tool</td>
<td>Standardized tool for screening of communication and symbolic abilities. The Infant Toddler Checklist is a 1 page long.</td>
<td>6-24 months</td>
<td>5-10 minutes</td>
<td>Sensitivity: 0.76-0.88 in low-and at-risk children at 2 years of age (moderate); specificity: 0.82-0.87 in low and at-risk children at 2 years of age (moderate). Standardized on 2,188 North American children aged 6-24 months; correlations: 0.39-0.75 with Mullen Scales at 2 years of age.</td>
<td>English</td>
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<tr>
<td><strong>ELM Scale-2</strong> - Early Language Milestone Scale</td>
<td>Assesses speech and language development.</td>
<td>0-36 months</td>
<td>1-10 minutes</td>
<td>Sensitivity: 0.83-1.00 in low-and high-risk populations (moderate to high); specificity: 0.68-1.00 in low-and high-risk populations (low to high). Small cross-sectional standardization sample of 191 children; 235 children for speech intelligibility item.</td>
<td>English</td>
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<td><strong>EMPP</strong> - Early Motor Pattern Profile Physician-administered standard examination</td>
<td>Physician-administered standard examination of movement, tone, and reflex development. Simple 3-point scoring system.</td>
<td>6-12 months</td>
<td>5-10 minutes</td>
<td>Sensitivity: 0.87-0.92 (moderate to high); specificity: 0.98 (high). Single published report of 1,247 high-risk infants.</td>
<td>English</td>
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<td><strong>MQ</strong> - Motor Quotient</td>
<td>Uses simple ratio quotient with gross motor milestones for detecting delayed motor development.</td>
<td>8-18 months</td>
<td>1-3 minutes</td>
<td>Sensitivity: 0.87 (moderate); specificity: 0.89 (moderate). Single published report of 144 referred children.</td>
<td>English</td>
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**BDI-ST** - Battelle Developmental Inventory Screening Tool, 2nd ed. - Directly administered tool

- **Description of the Tool**: Designed to screen personal-social, adaptive, motor, communication, and cognitive development. Results in pass/fail score and age equivalent. Can be modified for children with special needs.
- **Age Range**: Birth to 95 months
- **Administered Time**: 10-15 minutes (<3 years old) or 20-30 minutes (≥3 years old)
- **Accuracy & Psychometric Properties**: Sensitivity: 0.72-0.93 (moderate to high); specificity: 0.79-0.88 (moderate). Normed on 2,500 children, demographic information matched 2000 US Census data; additional bias reviews performed to adjust for gender and ethnicity concerns.
- **Available Languages**: English and Spanish

**BINS** - Bayley Infant Neuro-developmental Screen - Directly administered tool

- **Series of 6 item sets** screening basic neurologic functions; receptive functions (visual, auditory, and tactile input); expressive functions (oral, fine, and gross motor skills); and cognitive processes. Results in risk category (low, moderate, high risk).
- **Age Range**: 3-24 months
- **Administered Time**: 10 minutes
- **Accuracy & Psychometric Properties**: Sensitivity: 0.75-0.86 (moderate); specificity: 0.75-0.86 (moderate). Normed on ~1700 children, stratified on age, to match the 2000 US Census.
- **Available Languages**: English and Spanish

**Brigance Screens** - Directly administered tool. Can also use parental report for 0-23 months.

- **Series of 9 forms** screening articulation, expressive and receptive language, gross motor, fine motor, general knowledge, and personal-social skills and pre-academic skills (when appropriate).
- **Age Range**: 0-90 months
- **Administered Time**: 10-15 minutes
- **Accuracy & Psychometric Properties**: Sensitivity: 0.70-0.80 (moderate); specificity: 0.70-0.80 (moderate). Normed on 1,156 children from 29 clinical sites in 21 states.
- **Available Languages**: English and Spanish

*There are two types of accuracy. **Sensitivity** refers to the percentage of children with a disability or problem who are correctly identified by the screening tool. **Specificity** refers to the percentage of children without a disability or problem who are correctly identified by the screening tool.*
Other Developmental Screening Tools

Choices for Practices and Providers

To Purchase or for Additional Information


Public domain: www.firstsigns.com

Psychological Corporation

Wendy Stone, PhD, author: triad@vanderbilt.edu

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To Purchase or for Additional Information

Western Psychological Corporation: www.wpspublish.com

Paul H. Brookes Publishing Co.

Pro-Ed Inc: 800-897-3202; www.proedinc.com

See key references

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