



Is Earlier Better? Screening Very Young Children for Autism Spectrum Disorder

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BACKGROUND
There is currently a strong push for early identification of Autism Spectrum Disorder (ASD) so that children can benefit from early intervention. Autism screening in the primary care setting is considered an important part of this endeavor, and over the last two decades several different screening instruments have been developed for this purpose. Most of the tools are for children 18 months to 3 years of age. However, a current trend is for earlier screening, and thus several instruments have emerged for children from 8 months on. These early screeners are intended to be used with high-risk children.

GOAL
1) To critically review a set of ASD screening tools that target children under two years of age. 2) To recommend those for use with acceptable validity

METHOD
•Searched major data bases using key words and MESH term •Reviewed abstracts for articles meeting inclusion criteria: <ul style="list-style-type: none">•Available for U.S. use•For birth – three population•Report on sensitivity and specificity of the measure •Read all studies related to the development, reliability, validity, and predictive validity as examined through Receiver Operator Characteristics (ROC)

SUPPORT
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RESULTS					
Measure, Authors	Age mos	Description	Sensitivity Specificity	Research Quality And Feasibility	Recommended For Clinical Applications?
Demonstrated Validity RECOMMENDED					
Infant-Toddler Checklist (ITC), Wetherby & Prizant	8 – 24	Parent-rated 24 questions, scored 0-2, cut-off or standard score from manual	89% 89% For DD, not ASD specifically	Fair to Good; To be used as a monitoring device, e.g., every 3 months; only 5 minutes to fill out.	Yes, for 12 months on for broad-band screening.
Screening Test for Autism in Two-year-olds (STAT), Stone et al.	12 – 36	Clinician observation 12 activities administered in play session	95% 73%	Good Requires investment of training and cost to acquire kit and manual 20 minutes to fill out.	Yes, for 12 months on. Best prediction at 18 months. Works as an autism-specific screener.
Parent Observation of Early Milestones (POEMS), Feldman et al	1- 24	Parent-rated, 61 questions, scored 1-4; specific items included depend on age of child, cut off score	74% 73%	Fair to Good; 20 min to admin	Yes, autism-specific
NOT RECOMMENDED					
First Year Inventory (FYI), Reznik, Baranek et al.	12	62 questions, yes/no, cut off score	High but calculated retrospectively	Fair; 20 minutes to fill out.	No Undergoing revision
Early Screen for Autistic Traits (ESAT) Dietz & Swinkels et al.	14- 15	14 questions, yes/no, cut off score	High but calculated retrospectively	Poor; Two-stage screening, admin time too long, not used in English yet.	No
WHEN TO SCREEN AT 12 MONTHS					
SCREENING AT 12 MONTHS IS RECOMMENDED WHEN CHILDREN ARE HIGH RISK BECAUSE THEY HAVE AN OLDER SIBLING WITH A DIAGNOSIS OF ASD					
Clinical/Content Themes			Methodological Themes		
Autism symptoms emerge at different ages in different children			Reliability more difficult to achieve the younger the child		
Different autism symptoms are important at different ages			Instruments do not agree on exactly what to measure		
Configuration of symptoms differ among children with ASD			Characteristics of children in sample screened inconsistent across studies or not described		
Hard to distinguish ASD from other developmental disability at these younger ages			Reference standard measurement strategies inconsistent across studies		