

Title: A NEW INTERACTIVE SCREENING TEST FOR AUTISM SPECTRUM DISORDERS (ASD) IN TODDLERS

Abstract: Objective: To develop a clinically valid interactive Level 2 screening assessment for ASD in toddlers that is brief, and that is easily administered and scored by clinicians. Such a Level 2 measure is urgently needed to improve the early identification of toddlers with ASD and facilitate their access to care.

Methods: We describe the development, training, standardization, and validation of the Rapid Interactive Screening Test for Autism in Toddlers (RITA-T) with ASD-specific diagnostic instruments. The RITA-T can be administered and scored in 10 minutes. We study the validity of the RITA-T to distinguish between toddlers with ASD from toddlers with Developmental Delay (DD)/Non-ASD in an Early Childhood Clinic. We also look at its performance in toddlers with no developmental concerns. We identify a cut off score based on sensitivity, specificity and PPV of the RITA-T that best differentiates between ASD and DD/Non-ASD.

Results: Sixty-one toddlers were enrolled. RITA-T scores correlated with ASD-specific diagnostic tools ($r=0.79$; $p<0.01$) and ASD clinical diagnoses ($r=0.77$; $p<0.01$). Mean scores were significantly different between ASD, DD/Non-ASD and toddlers with no developmental concerns (20.8 vs. 13 vs. 10.6 respectively; $p<0.0001$). At a cut-off score of 15, the RITA-T presented a Sensitivity of 1.00, Specificity of 0.85, and a PPV of 0.88 in the identification of ASD risk in a high risk group.

Conclusion: The RITA-T is a promising Level 2 new interactive ASD screening tool to improve the early identification of ASD in toddlers in pediatric or in early intervention settings and access to treatment.