Title: Adaptive Functioning in Toddlers with Autism Spectrum Disorder

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Introduction: Adaptive functioning deficits are prevalent in individuals with ASD throughout the lifespan and delays in adaptive functioning are evident as early as toddlerhood (Paul, Loomis, & Chawarska, 2014). When adaptive behavior assessments, like the Vineland – II, were part of an ASD evaluation along with the gold-standard diagnostic measures, ADOS (Autism Diagnostic Observation Schedule) and ADI-R (Autism Diagnostic Interview – Revised), a clinician’s diagnostic accuracy rose by 84% (Tomanik, Pearson, Loveland, Lane, & Bryant Shaw, 2007). Adaptive functioning is often a better predictor of optimal outcomes for adults with ASD than intact cognition and language alone (Saulnier & Klaiman, 2018). Despite the growing research examining adaptive functioning in older youth and young adults, less is known about the development of adaptive functioning skills in toddlers with ASD. The present study seeks to address this research gap by examining the relationship between adaptive functioning and cognitive abilities in toddlers with ASD prior to the implementation of a parent mediated intervention.

Method: This study is a secondary analysis of a randomized control trial of a parent-mediated social communication intervention (JASPER; Kasari, Gulsrud, Paparella, Hellemann, & Berry, 2015). 86 toddlers (24 – 36 months) and their primary caregivers completed assessments at baseline. In order to examine the relationship between adaptive functioning and cognitive abilities, caregivers were interviewed using the Vineland II caregiver survey interview at baseline, which assess for adaptive functioning. The Vineland II (Sparrow, Cicchetti, & Balla, 2005) includes domains such as motor skills, socialization, communication, and daily living skills. In order to measure cognitive abilities, toddlers were assessed with the Mullen Early Scale of Learning. The Mullen is a comprehensive measure of cognitive functioning for infants and preschool children, from birth to 68 months. The Mullen scale consists of a gross motor scale and four cognitive scales-visual reception, fine motor, receptive language, and expressive language (Mullen, 1995). Pearson correlation coefficients were calculated to examine the relationship between adaptive functioning on the Vineland II and cognitive abilities using the Mullen.

Results: Results indicate that higher total Mullen score was strongly correlated with higher scores on the Vineland II domain of daily living skills (p < .0001) and communication (p < .0001) at baseline. Mullen receptive language domain was also strongly correlated to Vineland daily living skills (p < .0001) and communication domains (p < .0001). In addition to these findings Mullen expressive language domain was strongly correlated with the Vinland communication domain (p < .0001).

Discussion: These findings bolster the validity of both measures specifically in the communication and language domains. The Vineland II is a parent survey interview so it can inherently have parent report biases but the strong correlations between the two measures add validity to the constructs measured. The results also report similar findings to other studies focused on the relationship between cognitive abilities and adaptive functioning in this population, however this report highlights the strong relationship between receptive language skills and adaptive daily living skills. This study suggests that daily living skills and deficits are identifiable at an early age and interventions focused on improving daily living skills and receptive language can have meaningful outcomes for families and individuals with ASD throughout the lifespan.

References:


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