Title: Comparing Joint Attention Skills in Children with ASD across Structured and Unstructured Settings

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Introduction: Joint attention (JA), or the ability to share an experience around an object or activity, is an early indicator of social interaction and an important precursor to language. Skills used to coordinate JA often emerge within the first and second years of life. Research shows that children with ASD exhibit atypical development of JA skills compared to typically developing children. Considering the important role JA plays in language development, accurately characterizing JA skills in children with ASD is critical for assessing skill level and designing early interventions. The commonly accepted gold standard for JA assessment is the Early Social Communication Scales (ESCS). However, researchers and clinicians may benefit from expanding their methods of JA assessment. Multiple observations across different contexts may improve the accuracy of assessing children’s development of JA and improve ecological validity. The current study compares rates of JA across three different assessment contexts: structured play, unstructured play, and the ESCS.

Method: Children with ASD (n=114), 2-5 years old, completed three assessments: 1) the ESCS, which examines children’s social communication, 2) the Structured Play Assessment (SPA), which examines children's spontaneous play, and 3) an unstructured caregiver-child free play interaction (MCX). Spontaneous, child-initiated JA skills were coded from videotapes of the assessments using ESCS coding guidelines. Due to the unstructured format of the MCX, accurate coding of JA eye contact was not possible; therefore, only higher-level JA skills such as gestures (point, show, give) and language were examined in this study. Scores were converted into rates per minute to control for differing lengths of time of the assessments. SPA coding is ongoing (currently completed for 26 children) but will be completed by the conference. A preliminary multi-trait multi-method matrix analysis was conducted using a subsample of 26 children to assess validity of JA skills scores across measures. Additionally, JA rates between the ESCS and MCX in the full sample were analyzed for differences.

Results: Preliminary analyses revealed strong positive correlations between rates of child-initiated JA in structured (r=.67) and unstructured (r=.61) play when compared to the ESCS. Comparison of correlation coefficients of child-initiated JA against rates of child-initiated requesting coded in the three measures provides initial evidence of convergent and discriminant validity. Descriptively, JA rates were similar between the ESCS and SPA, but was higher in the MCX. Further analysis on rates of child-initiated JA skills in the full sample show significantly higher rates (Wilcoxon signed rank test, Z=6.44, p<.001) in the MCX (M=.79, SD=1.1) than in the ESCS (M=.17, SD=.29).

Discussion: These findings, though preliminary, suggest that structured and unstructured play assessments can be utilized as tools to measure child-initiated JA, providing researchers with more opportunities to observe these skills in young children with ASD. Furthermore, unstructured play settings may provide a more naturalistic environment for children with ASD to display their abilities. Interestingly, there were significantly higher rates of JA skills during unstructured play with a caregiver than in the ESCS, which is designed to provide opportunities for JA. These findings suggest that even brief, naturalistic observations of caregiver-child interactions can provide researchers with important and ecologically valid information.

References/Citations: