**Title:** Language and Reciprocal Social Behavior in Adolescents with ASD

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**Introduction:** Autism spectrum disorder (ASD) is a lifelong neurodevelopmental disorder that is characterized by restrictive, repetitive interests, as well as deficits in social communication. Notably, individuals with ASD demonstrate impairments in reciprocal social behavior. Reciprocal social behavior is complex, and requires attention, interpretation, and response to a communication partner’s interpersonal cues, along with motivation to engage in these social interactions. The Social Responsiveness Scale is a frequently used parent questionnaire that provides a quantitative measure of social behavior in ASD. The SRS identifies five areas of social impairment; these include social awareness, cognition, communication, motivation, and autistic mannerisms\textsuperscript{1,2}. Comparing observational measures of language with the areas of impairment identified in the SRS will help pinpoint which underlying aspects of reciprocal social interactions are impacting conversations.

**Method:** Thirty-one adolescents with ASD participated in this study (mean age = 15.55 years). Participants were drawn from the baseline data collection of a larger study\textsuperscript{3}. Participants completed module 4 of the Autism Diagnostic Observation Schedule (ADOS). Interview questions from the ADOS regarding friendships, the future, and social difficulties were transcribed for grammatical and lexical complexity, as measured by mean length of utterance (MLU) and number of different words produced, respectively. Additionally, each participant sentence was coded for whether the participant was staying on topic and whether they were expanding on their thoughts beyond what was required for the conversation\textsuperscript{4}. Participant sentences or phrases were either obligatory (required response) or non-obligatory (additional, unrequired response). Each sentence or phrase was also coded as being adequate (answer related to topic, but did not include new information), elaborate (did include new information, related to topic), inadequate (did not follow the semantic expectations of the conversation), or a topic change (introduced a new topic). Parents of the participants also completed the Social Responsiveness Scale (SRS). The SRS includes 65 items, which fall into five distinct areas of social deficits (social awareness, cognition, communication, motivation, and mannerisms). \(T\)-scores were calculated for each of the five areas, along with an overall total \(T\)-score. We present means and standard deviations of language variables, along with Pearson correlations examining relationships between language variables and SRS \(T\)-scores.

**Results:** The adolescents with ASD produced an average MLU of 7.05 (SD = 2.19), and an average of 231.77 different words (SD = 96.25). Their utterances were 44.13\% obligatory and 55.87\% non-obligatory. They also produced a higher percentage of elaborate sentences (58.19\%) and adequate sentences (40.16\%) compared to inadequate sentences (0.68\%), or topic changes (1.03\%). Correlations indicated several relationships between the social motivation sub-score and language variables (social motivation and: MLU, \(r = -.45, p = .022\); NDW, \(r = -.42, p = .032\); adequate sentences, \(r = .43, p = .027\); elaborate sentences, \(r = -.41, p = .036\); obligatory sentences, \(r = .68, p = .000\)) indicating that a higher impairment score for social motivation is related to less complex language, as well as less non-obligatory or elaborate turns. Scores for other social deficit areas of the SRS, including social communication and social cognition, were not related to any language variables.

**Discussion:** Language in this sample of adolescents with ASD was complex, but variable, indicated by the large SDs for MLU and number of different words produced. The relationships between social motivation on the SRS and language variables indicate that this factor of social responsiveness may play an important role not only in reciprocal aspects of language, but also grammatical and lexical complexity. Interestingly, other sub-scores of the SRS were not correlated with language variables. This may be because the communication items in the SRS include additional aspects of interaction (e.g., facial expressions, tone of voice) outside of our measured outcomes (e.g., grammar and turn types). Thus, social motivation appears to play an important role in reciprocal interaction. Additional implications will be discussed in the poster.
References/Citations:


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