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It has been theorized that impairments in executive function may contribute to the repetitive behavior symptomatology associated with ASD. Prior attempts to evaluate this theory have yielded mixed results, with only a handful of studies reporting evidence of a relationship between executive function ability and repetitive behaviors.

This study further elucidates the nature of the relationship between ASD-related impairments in executive function and manifestation of repetitive behavior. Specifically, we evaluated the hypothesis that the relationship between repetitive behaviors and task performance would be more evident in the presence of multiple executive demands (i.e., inhibitory control & task switching).

Twenty two children (mean age: 14.4 years) with high functioning ($IQ > 70$) ASD were recruited. An eye movement task was utilized to assess inhibitory control and cognitive flexibility concurrently and individually. The Repetitive Behavior Scale (RBS), a parent questionnaire that addresses the occurrence of a wide range of repetitive behaviors within the past month, was used to assess repetitive behavior symptomatology for this study.

Hierarchical regression revealed significant relationships between repetitive behaviors and performance on the eye movement task only in conditions which required multiple executive abilities. Conditions that required only a single executive ability were not significantly related to the RBS. The relationship between repetitive behavior and executive dysfunction appears to depend critically upon the introduction of multiple executive demands. Within this context however, increased task difficulty may also play a role in strengthening this relationship. Investigating this relationship is one future direction of this line of research.