Title: Longitudinal Analysis of Stereotypy: What Changes, What Remains the Same

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Introduction: Individuals with autism spectrum disorder (ASD) often display stereotypic behaviors, and if not treated, can interfere with explorative and cognitive activities (Ghanizadeh, 2010). The function of stereotypy has been identified as primarily self-stimulatory or automatically reinforcing, but stereotypy can also be maintained by social or nonsocial positive and negative reinforcement contingencies (Cunningham & Schreibman, 2007). Research evaluating changes in stereotypy over time in adults with ASD is limited although existing research suggests that stereotypy decreases with age (Esbensen et al., 2009). The aim of this study was to monitor and assess stereotypy of an adult diagnosed with ASD over the course of a two and a half year period.

Methods: Garrett, was a 42-year-old male diagnosed with ASD, Generalized Anxiety Disorder, Insomnia, and Severe Intellectual Disability. Garrett was observed for one hour a week, with the day and time held constant, for a total of 104 weeks over a two and a half year period. Videos were scored using Noldus’ The Observer® XT software, and interobserver agreement (IOA) between two independent scorers was calculated for 30% of observations. Rate per minute (rpm) of each topography of stereotypy was calculated. Stereotypic behaviors included head tapping, arm flinging, walking in circles, and stereotypy with objects (tearing papers, shaking containers of liquids, pouring multiple glasses of water down the sink).

Results: Data analysis revealed changes in the patterns of individual topographies of stereotypy, with particular topographies fluctuating in a parallel fashion (i.e., an observation where the rate of walking in circles was high, the rate of arm flinging and head tapping was also high). For example, rates of walking in circles in observations 92 and 93 were 0.52 and 0.40 rpm, respectively; arm flinging, 0.15 and 0.47 rpm; and head tapping zero and 0.05 rpm. The rate of these three behaviors peaked in observation 94 (walking in circles, 1.11 rpm; arm flinging, 1.14 rpm; and head tapping, 0.27 rpm). Following this peak, the rate of all three topographies declined in observation 95 (walking in circles, 0.25 rpm; arm flinging, 0.07 rpm; head tapping, 0.03 rpm). Stereotypy with objects, however, occurred at a fairly consistent rate across observations.

Discussion: Stereotypic behaviors are a core feature of ASD, and individuals who engage in stereotypy often spend a great deal of time performing these behaviors which has the potential to interfering with adaptive living skills. The patterns of stereotypy observed in this study are important as they give information regarding the dynamic nature of stereotypy in adulthood. Future studies should more closely examine changes in stereotypy as individuals with ASD age and identify variables that account for patterns observed.

References/Citations:

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