EXAMINING THE DURABILITY OF PEERS FOR ADOLESCENTS WITH ASD: MAINTENANCE OF NEUROLOGICAL AND BEHAVIORAL EFFECTS

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To date, there are no known published studies that have assessed the maintenance of treatment effects in the context of neurological changes and their relationship to behavioral outcomes following a social skills intervention for adolescents with Autism Spectrum Disorder (ASD). The few studies that have incorporated long-term assessment into their design have focused exclusively on sustained behavioral responses to treatment. Individuals with ASD across the lifespan exhibit aberrant neural activity, which is thought to underlie social skill deficits noted in persons on the spectrum. Thus, this study sought to examine the impact of a social skills intervention, the Program for the Education and Enrichment of Relational Skills (PEERS; Laugeson, Frankel, Mogil, & Dillon, 2009), on the maintenance of neural plasticity and treatment gains in social functioning. Neural activity was assessed via resting state electroencephalography (EEG) in terms of spectral power and asymmetry, which also was compared to a cohort of typically developing adolescents. Additionally, behavioral outcomes, examining a variety of social domains, at pre-, post-, and 6-month follow-up, were investigated for their relationship to changes in EEG activity. Results revealed that adolescents with ASD demonstrated a decrease in gamma activity in the right temporal region following PEERS, which was maintained at 6-month follow-up. This sustained neural change related to fewer problem behaviors and improved social cognition, which highlights the role of neural plasticity as a mechanism for maintaining improvements in behavioral presentation following intervention.