

A. Pachol, B. Corbett

Relationship between perceived stress, reported anxiety, and elevated evening cortisol in youth with autism spectrum disorder

Department of Psychiatry and Behavioral Sciences, VUMC

Recent studies have reported elevated evening cortisol levels in children with autism spectrum disorder (ASD) compared to typically developing (TD) children, and stress associated with changes or problems throughout the day has been identified as a potential contributor. Our goal was to determine if relationships exist between perceived stress or reported anxiety with elevated evening cortisol in children with ASD. The study examined 234 youth between 10 to 13 years of age. We hypothesized that elevations in evening cortisol would be associated with increased perceived stress and trait anxiety. Self-report measures were used to determine levels of perceived stress and reported anxiety. Spearman correlations examined associations between self-reports and evening cortisol. Resulting t-tests confirmed a statistically significant difference between diagnostic groups on evening cortisol levels, perceived stress, and anxiety, as well as positive correlations between all variables (all $p < 0.05$). However, when examining associations within diagnostic groups, correlations were not statistically significant. It appears that observed elevation in evening cortisol levels in children with ASD is not primarily resulting from elevation in perceived stress or reported anxiety. Further investigation is needed to identify other factors which may be contributing to elevated evening cortisol in ASD.