

Depressive symptoms among female adolescents have reached a decade high with the COVID-19 pandemic, possibly due to increased stress exposure. The present analysis leverages a pre- and post-pandemic examination of psychosocial stress in 92 adolescents (11-14; assigned female sex at birth) to compare cortisol and neurophysiological stress responses. Salivary cortisol was collected at predetermined intervals during the Trier Social Stress Test while EEG was recorded. Additionally, parents self-reported parenting styles and participants completed the behavioral approach/avoidance questionnaire (BIS/BAS). Data collection occurred 09/2018–03/2020 for the pre-pandemic cohort ($n=50$) and 12/2021–07/2023 for the post-pandemic cohort ($n=42$). Pre-pandemic participants exhibited the expected increase in cortisol from baseline, yet post-pandemic participants had greater baseline cortisol that decreased following stress onset ($F(5,400)=6.78, p<.001$). Post-pandemic participants also demonstrated steeper aperiodic EEG slopes during stress ($F(1,81)=19.1, p<.001$) and an increase in slope between the resting state and stress onset ($F(1,42)=16.1, p<.001, \eta_p^2=.28$). Further, the post-pandemic cohort reported lower rates of authoritative parenting style ($\beta=-9.5, t(81)=-2.2, p=.03$) and greater behavioral avoidance ($\beta=-16.1, t(84)=-3.3, p=.002$), which predicted cortisol output ($AUC_g; R^2=0.23 [F(6,72)=3.5], p=.004$). The atypical neuroendocrine environment exhibited by post-pandemic participants suggests the chronic stress experienced during the COVID-19 pandemic possibly dysregulated participants' acute stress responses. Additionally, parenting style may impact adolescents' responses to psychosocial stress.