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### Neuroticism as a Moderator of the Depressogenic Effects of Stress: Examining the Role of Neural Reward Processing

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#### Recommended Citation

Balbona, Jared, "Neuroticism as a Moderator of the Depressogenic Effects of Stress: Examining the Role of Neural Reward Processing" (2018). *Spring 2018*. 4.

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# NEUROTICISM AS A MODERATOR OF THE DEPRESSOGENIC EFFECTS OF STRESS: EXAMINING THE ROLE OF NEURAL REWARD PROCESSING

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While early life stress (ELS) has consistently been established as one of the most potent predictors of depressive symptomatology in adulthood, not all who are exposed to childhood trauma develop depression as a result. Increasing evidence suggests that the depressogenic effects of stress may be impacted by both ventral striatum (VS) reward reactivity and neurotic personality traits; however, no study to-date has examined how these individual factors are related to one another in conferring overall risk for psychopathology. We sought to address this gap by examining fMRI and genomic data, as well as self-reported ELS, neuroticism, and depression from 1,174 undergraduate students. Linear regressions and structural equation models were developed and run to determine whether neuroticism moderates the relationship between ELS and VS reward reactivity, and whether VS activity subsequently mediates the relationship between ELS and depression; consistent with recent recommendations, covariate of no-interest x predictor variable interactions were also entered as covariates in our analyses. We found that that self-reported neuroticism (but not polygenic risk for neuroticism) significantly interacted with childhood trauma to predict VS reward reactivity, and that VS activity was somewhat associated with depression. These findings highlight neuroticism as a potentially important link in understanding the neurobiological effects of early life stress on depressive symptomatology, and provide possible avenues to future treatment and prevention strategies.