Neurocognitive and genetic influences on Eating Disorder and Substance Use Disorder comorbidity in individuals from families enriched with Substance Use Disorders.

Eating disorders (EDs), including anorexia nervosa (AN), bulimia nervosa (BN), and binge-eating disorder (BED), have the highest mortality of all psychiatric disorders, with no pharmacological treatment available. The prevalences of AN, BN, and BED differ from each other as well as by age, by gender, and by race/ethnicity. EDs are often comorbid with substance use disorders, complicating treatment and increasing morbidity and mortality. The comorbidity of EDs and SUDs suggests that there may be shared neurocognitive and genetic influences that underlie both disorders. However, no previous work has examined the influence of neurocognitive and genetic factors together in a large, diverse sample of men and women. The goal of this proposed research is to address gaps in knowledge and elucidate the neurocognitive and genetic comorbidities of EDs and SUDs, across gender, age, and race/ethnicity, utilizing data from the Collaborative Study on the Genetics of Alcoholism (COGA), a large family sample enriched for SUDs and related disorders (N= 14,747). Specifically, I will 1) examine rates of DSM-IV eating disorders (AN, BN, and BED) and rates of comorbid EDs and SUDs, and 1a) whether these rates differ by self-reported race/ethnicity, gender, or age. Next, I will 2) examine neurophysiological and neuropsychological profiles among COGA participants with EDs and comorbid SUDs, and 2a) whether these profiles differ by self-reported race, gender, and age. Last, I will 3) examine whether genetic risk factors (polygenic risk scores (PRS)) for EDs and SUDs moderate the neurocognitive profiles for those with EDs and comorbid SUDs, and 3a) whether these PRS x neurocognitive profiles differ by genetic ancestry, sex, or age. The overarching goal of this work is to increase understanding of the etiology of ED and SUD, informing prevention/intervention efforts tailored to those with co-occurring EDs and SUDs and to increase inclusion of diverse individuals in this literature.