

□ **Project Title:** Childhood Trauma and Mental Health among College Students: Identifying Neurological, Physiological, and Behavioral Pathways

- **Research Team:**

Toni Watt (PI), Sociology

Natalie Ceballos (Co-PI), Psychology

Seoyoun Kim (Co-PI), Sociology

Xi Pan (Co-PI), Sociology

- **Abstract**

The Adverse Childhood Experiences study (ACEs) revealed that strains in childhood such as abuse/neglect, parental depression, and family violence are common and can produce a level of toxic stress in young children that has lifelong consequences. This study demonstrated that childhood trauma significantly and substantively increases the risk of adult disease, mental illness, and early death. While the ACE research has been highly influential, researchers have not yet elucidated the mechanisms through which childhood trauma affects health and how to potentially interrupt these destructive pathways. The Mental Health Research Group proposes a study to address some of the most notable gaps in the literature on the relationship between childhood trauma and mental health. Using survey and biomarker data from college students, the group will trace how childhood trauma relates to neuronal health (BDNF), inflammation (C-Reactive Protein), and physiological dysregulation (Iron deposition). We will also examine how these internal processes relate to mental disorders (cognitive impairment, depression/anxiety, and addiction/substance abuse). Finally, we will search for intermediate pathways and moderating influences such as diet, exercise, and social support. The ultimate goal of the study is to examine how trauma “gets under the skin” in order to better understand risk, resilience, and recovery. This line of research directly responds to National Institute of Mental Health (NIMH) research objective 2.2, investigating clinically relevant biomarkers and behavioral indicators that predict changes across the mental health trajectories. The MIRG pilot data will be used to create three NIH grant proposals.