

□ **Project Title:** Does Social Media Make Us Sick? A Pilot Study of the Effects of Social Media on Physiological Reactivity and Mental Health

- **Research Team:**

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- **Abstract**

Social media use has been steadily increasing in recent years, and its association with mental health remains unclear. The purpose of this study is to determine if certain types of social media posts induce measurable physiological responses, including cardiovascular indices and changes in blood and salivary stress biomarkers, that may ultimately influence physical and psychological health. For the proposed study, we first intend to develop a set of social media posts, called the Social Media Stimulus Set (SMSS), and systematically determine whether each post is interpreted as benign or anxiety provoking. We will then conduct a laboratory-based experiment to assess physiological reactivity to the SMSS. Cardiovascular measures (systolic and diastolic blood pressure and pulse rates), salivary biomarkers (cortisol and alpha-amylase), and the blood plasma biomarkers (BDNF and ACTH) will be assessed. The data from this MIRG study will serve as pilot data for two external interdisciplinary grant proposals. The first proposal will further test the effects of exposure to the SMSS on inflammatory and immune system responses. The second proposal will develop an intervention using artificial intelligence and machine learning, which will lead to the creation and testing of an algorithm to interpret posts on individual social media feeds and automatically alert the individual once their social media feed reaches a threshold proportion of anxiety provoking posts that has been previously determined (via the current MIRG project) to cause measurable physiological and psychological reactivity.