**Can Mindfulness Attenuate the Stress Response Elicited by a Visual and Auditory Stimulus?**

**Supporting Summary (500 word maximum):**

Research conducted in various animal species including humans has led to the accumulation of evidence suggesting that stress, especially chronic stress, can be physiologically and psychologically harmful. Indeed, researchers have found a correlation between chronic exposure to stress and the development of mental illnesses, such as anxiety and major depression disorders. While stress seems to be an inevitable aspect of human life, stress can vary in duration and intensity depending on the individual. Experiencing a stressful stimulus leads to the activation of the hypothalamic pituitary adrenal (HPA) axis, which, in turn, causes the release of stress hormones (such as cortisol). Furthermore, the activation of the HPA axis leads to alterations of various physiological measures such as an increase in heart rate and blood pressure. Interestingly, various interventions (such as mindfulness) have been shown to be able to ameliorate such stress-induced effects. The current study assessed whether a brief stressful visual and auditory stimulus can elicit a measurable physiological stress response in college students and whether mindfulness can attenuate this stress response. Specifically, college students were recruited from an undergraduate psychology program. The participants watched a mildly humorous 32-minute video clip of an unfamiliar television show that contained a 1-second stressful stimulus. This stressful visual and auditory stimulus had been spliced into the television show and occurred halfway through the video clip—allowing for comparison of physiological measures between baseline (prior to stressor), during stressor, and during recovery (after stressor). Throughout watching the video clip, the participant’s physiological measures were recorded using an electrocardiogram associated with BioPac software. Subsequently, the participant’s heart rate and heart rate variability prior and immediately following the stressor were compared by repeated measures ANOVA to assess whether the stress response was measurable. In addition, the length of recovery for the heart rate and heart rate variability to return to baseline was assessed between individuals with prior exposure to yoga and mindful breathing and individuals without such exposure. The successful completion of this experiment will guide future studies to assess various conditions that might shorten or prolong the recovery period after a stressful experience. Obtaining knowledge about the factors that can shorten the recovery period after a stressful experience will allow us to promote healthy coping techniques. Indeed, developing healthy coping mechanisms to deal with stress could positively influence the academic performance of college students and improve their psychological and physiological well-being.