Institute for Mind and Brain Colloquium Series
Invited Speaker

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“HRV Biofeedback: A Perfect Mind-Body Intervention for PTSD”

Abstract: Research data over the past two decades has shown that heart rate variability (HRV) is diminished in PTSD. Lower HRV signals a disturbance of normal autonomic function and indicates allostatic sympathetic hyper-arousal. However, normal autonomic cardiac adjustments are necessary for successful processing of information from environmental stimulation, which is the early stage of the basic orienting response (OR) that enhances reception and appraisal of stimulus information. Cardiac deceleration occurs during cognitive appraisal of external stimuli (e.g., vigilance) and requires parasympathetic activation; cardiac acceleration occurs during internal processing of external information (e.g., response selection and behavioral output) and requires sympathetic activation. In PTSD, tonic sympathetic tone short-circuits vigilance, producing disinhibition of behavioral responses. Thus, attentional bias is associated with PTSD and occurs because cardiac deceleration during vigilance is disrupted. Currently there is burgeoning research showing that HRV Biofeedback – the training of resonant frequency breathing, attentional focusing, and positive emotional state – reduces symptoms of PTSD through normalization of autonomic function. In this presentation, consideration will be given to how HRVB lowers disinhibition and hyper-arousal, and leads to improvement in PTSD symptoms. Our program of research, including data from past projects and future proposals, all aimed at demonstrating the beneficial effects of HRVB on PTSD symptoms, will be described.