An Online Yoga & Mindfulness Intervention for Young Adults with Posttraumatic Stress Disorder: Preliminary Analysis of Baseline Heart-Rate-Variability Data
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Introduction: Posttraumatic stress disorder (PTSD) is a major public health concern with Canadians reporting the highest prevalence worldwide (9.8%)\(^1\). PTSD is linked to debilitating deficits in cognitive-emotional and social functioning\(^2\) and increased risk of chronic physical disease (e.g., cardiovascular disease)\(^2\)\(^3\). Over 70% of all mental health problems appear before 25 years of age\(^4\)\(^5\) and young adults are the most likely demographically-defined cohort for mental health disorders, substance misuse, and suicide\(^6\). When exposed to adverse, traumatic childhood events (e.g., sexual assault, gender-based violence, extreme weather disasters) young adults are at heightened risk for chronic anxiety disorders (e.g., PTSD) and can have additional difficulties in navigating transitions during young adulthood. Thus, accessible and scalable mental health interventions for young adults exposed to trauma are urgently needed. Internet-delivery of mindfulness-based CBT and yoga (MBCBTY), are treatment options for mental health disorders that are both supported in current literature. Nonetheless, they have never been combined within an integrated intervention method. The purpose of this randomized controlled trial (RCT) is to evaluate the effectiveness of such an online, integrated mind-body intervention in the reduction of PTSD symptom severity.

Methods: An 8-week RCT comparing an online mindfulness-based CBT intervention with wait list controls (WLC) in reducing PTSD symptoms will be conducted.

Participants: Young adults, ages 18-34 years, who meet DSM-V criteria for trauma exposure and clinical PTSD symptoms at an academic institution in central Ontario. A total of 50 participants will be randomized to MBCBTY (n =25) or a wait list control (WLC) condition (n =25).

Intervention Condition: MBCBTY will include access to online weekly CBT modules (e.g., non-avoidance; non-judgment) that include references to daily mindfulness meditation and yoga-based exercises. MBCBTY participants will engage in weekly phone contacts with a trained health coach to optimize adherence. WLC will receive educational materials on mental health symptom reduction.

Primary outcomes: 1) PTSD symptom severity as measured by the Clinician Administered Posttraumatic Stress Scale for DSM-V (CAPS-5) and; 2) Objective measures of autonomic regulation use heart-rate variability (HRV) and pupil dilation (PD) observations in response to stressful emotional stimuli as measured by electrocardiography (ECG) and Tobii Pro glasses software.

Results: This presentation includes preliminary descriptive data of demographics and PTSD symptom severity at baseline. Exploratory analyses of heart-rate-variability and pupillometry of n = 4 participants will be reviewed to better understand and estimate autonomic regulation responses.

Dissemination: Findings will help inform large-scale global mental health interventions aimed at addressing PTSD and chronic anxiety among populations exposed to childhood trauma.