

## Catalyst Grant: Post-Traumatic Stress Injuries among Public Safety Personnel

### Instructions:

The [Post-Traumatic Stress Injuries \(PTSI\) among Public Safety Personnel](#) (PSP) Catalyst grant was developed to strengthen and expand the evidence base needed to inform current and future policies, practices and programs related to PTSI in PSP. This funding opportunity will improve the mental wellness and resilience of Canada's PSP through innovative research.

As outlined in the [conditions of funding](#), funded teams are required to facilitate knowledge exchange among stakeholders and catalyst grant holders by participating in a workshop. This template is therefore provided, and the resulting report will support end-of-grant knowledge translation activities and the workshop on April 30 – May 1, 2020 in Calgary, AB.

The completed report is due by **March 16, 2020**.

**Project Title:** The SKIP study: Sudarshan Kriya Yoga In Post traumatic stress injury (SKIP), an RCT for Public Safety Personnel

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**Priority Research Area:** Mental and Behavioural Diseases

**Relevant PSP Population(s):** This study is seeking to recruit public safety personnel in London, Ontario and the surrounding area. Recruitment has been focused on fire fighters, paramedics, corrections officers, police officers, health care workers, emergency dispatch, and related fields.

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### **What is the issue?**

*(max 100 words)*

Public safety personnel (PSP) who are first responders frequently put their physical and mental health at risk while offering their service to society. PTSD, and its related illnesses (PTSI) is the most common mental illness in this population, yet it frequently remains underdiagnosed, undertreated as well as inadequately treated due to stigma, lack of access to formal services as well as inadequacy of currently available therapies.

### **What was the aim of the study?**

*(max 150 words)*

We aim to assess the effects of Sudarshan Kriya Yoga (SKY), an easily learnable yogic based breathing technique, with previously proven benefits in victims of natural disaster and American veterans. We assessed SKY versus an active control, Health Education Program (HEP) in PSPs across London and surrounding areas. This study aims to improve symptoms of PTSI by providing this intervention in gender-identified groups delivered in a convenient, nonthreatening environment in the community.

### **How was the study conducted?**

*(max 100 words)*

This study is a single-center, blinded (rater, investigator, and clinician), longitudinal, Randomized Controlled Trial (RCT) comparing a 12-week SKY intervention to a Health Education Program (HEP) group in 74 PSP participants with PTSI. The primary outcome is change in self-rated PTSD Check List (PCL-5) scores from baseline to week-12 follow-up. Secondary outcomes include change in depression, anxiety, quality of life, and substance use. We also planned to explore changes in blood inflammatory markers and heart rate variability.

### **What did the study find?**

*(max 200 words)*

We were able to enroll 16 PSPs over the last 9 months before COVID-19 stopped our study. Our recruitment has been very broad based. A preliminary data analysis was completed using data from 16 PSP's who had completed a baseline assessment and one or more follow-up assessments. From this sample 50% of participants were female and the mean age was 43.9 +/- 10.60. The sample was 87.5 % caucasian, 56.3% were married or in a common law relationship, and 87.5% had completed post secondary education. From this sample 56.3% had experienced childhood trauma, 87.5% were exposed to multiple traumas, and 62.5% indicated PTSI symptoms were due to work related trauma. Thirty-one percent of participants screened positive for complex PTSD. An independent samples t-test confirmed that all groups were statistically similar at baseline in terms of PTSD, depression (rater assessed and self-rated) and anxiety symptoms. A paired-samples t-test demonstrated that the SKY group showed significant improvement from baseline to week 12 in symptoms of PTSD (mean decrease 11.86 +/- 8.86, p=0.012) and self-rated depressive symptoms (mean decrease 9.00 +/- 7.28, p=0.017). The HEP group showed significant improvement in rater assessed depressive symptoms from baseline to week 12 (mean decrease 6.67 +/- 2.31, p=0.038) . The study is currently ongoing. Only 7 participant samples of end-point SKY data and 3 participants samples of end-point HEP data are available for pre/post analysis.

**What are the implications of this study?**

*(max 100 words)*

Final results are dependent on our ability to continue to recruit after the epidemic is over. Preliminary findings even with a very small sample suggests that the SKY intervention significantly improves PTSD symptoms (primary outcome) as well as a reduction in depression and anxiety symptoms, substance use and improvement in function (secondary outcomes) significantly more than the control at the primary end point (12 weeks) it could be that there is significant policy implication for the implementation of SKY as a preferred intervention of choice for the management of PTSI in PSPs. This could be further assessed in subsequent larger multi-site studies.

**What are the key messages?**

*(max 100 words)*

Sudarshan Kriya Yoga, SKY, can be offered to PSP's as an easily accessible alternative and/or adjunctive treatment for PTSI symptoms within their own community. Offering this treatment in a group setting among the peers of PSP's will help to reduce the stigma surrounding PTSI. If the study is successful we will utilize the help of our community partners to ensure this treatment is available to all PSP's with PTSI symptoms in their own communities.

**Provide a list of potential target audiences for this research**

The results of this study will be shared with the Canadian Mental Health Association (CMHA). CMHA Middlesex in the lead community mental health agency in London Middlesex with established links to PSPs. The team plans to share the results of this study with branches of CMHA across Canada. The results of this study will also be shared with the general public through the use of media outlets including local and national media. Through traditional KT activities including an international conference presentation and manuscript publication we intend to provide the results of this study to physicians who offer treatment for PTSI.

