

The Meil Family Foundation Research Award for Neurocognitive Studies

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Project Title: *Exploring Mind Body Resilience and Coping/Cognitive Exercises-(EMBRACE): A Psychoeducational Intervention for Adult Congenital Heart Disease, a Randomized Control Trial*

Congenital heart disease (CHD) is a problem with the structure of the heart that is present at birth. CHD is one of the most common birth defects in the United States, occurring in approximately 1% of live births per year. In addition to experiencing physical conditions such as hypertension, abnormal heart rhythms, and congestive heart failure, adults with CHD are at increased risk for anxiety and depression, as they have dealt with the stresses of a chronic heart disease since childhood. These psychological conditions further increase the risk of serious cardiovascular events such as stroke and coronary artery disease in an already vulnerable population.

To address this, we must employ strategies to treat not only the physical conditions themselves, but also the significant stress of having chronic heart disease. This includes improving coping skills and resilience, as well as identifying symptoms of anxiety and depression. To date, however, there are limited data available on the impact of mindfulness-based behavioral interventions on adults with CHD (ACHD). The knowledge gained from this proposed ACHD-specific mindfulness-based behavioral intervention will allow ACHD providers to support more competently the psychosocial needs of this patient population.

The team at Children's National Hospital proposes to fill this gap by studying the effects of a mindfulness-based behavioral intervention on adults with CHD. We will use major components of the well-studied Mindfulness Based Stress Reduction Program (MBSR), an evidenced-based program that focuses on moment-to-moment awareness and encourages daily meditation and other mindfulness practices. In populations such as cancer patients, MBSR has been shown to reduce stress and anxiety and improve long-term quality of life. In addition, we will tailor our program to address situations and challenges unique to adults with CHD, including a separate support group component for both younger and older participants. The program will also include cognitive behavioral techniques to improve management of stress and anxiety. We will examine the impact of this modified MBSR program on a group of adult CHD patients, and when comparing them to a control group, aim to identify if this program is clinically beneficial. We anticipate that our findings can be translated into clinical practice and will serve as a roadmap for holistically treating adults with CHD in the future.