

# Symposium on Transcendental Meditation as a Clinical Health Intervention

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OCTOBER 20, 2021 · WASHINGTON, DC

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SESSION 4

## ADOLESCENTS AND YOUNG ADULTS Adverse Childhood Experiences, Mental Health

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### Symposium Abstracts

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#### ABSTRACT 1

#### **The Remarkable Teen Brain: Highly Neuroplastic, Full of Potential -- Yet Vulnerable to Anxiety and Depression**

Richard A. Friedman, MD

Professor of Clinical Psychiatry at Weill Cornell Medical College;

Director of the Psychopharmacology Clinic

at the Payne Whitney Psychiatric Clinic, New York

The teen brain is the most neuroplastic it will be during an individual's lifespan. Adolescence is a time when the brain is exquisitely sensitive to the impact of the environment and has a heightened capacity for learning. That's why, for example, teens can learn a foreign language and calculus with an ease that is the envy of every adult who wants to acquire such knowledge later in life. But adolescence is also a peak time for the onset of most major psychiatric illnesses, like anxiety disorders, major depression, ADHD, and substance abuse. Three-quarters of all psychiatric disorders that we diagnose in adults are present by the age of 25 and 20 percent of adolescents have a mental illness that will persist into adulthood.

The fact that most of the major psychiatric disorders begin in adolescence is a powerful motivation to develop early interventions—both psychosocial and biological-- that can effectively treat these disorders. The challenge is that the developing brain of a teen is different from the developed brain of an adult. For example, human imaging studies show that sub-cortical structures, like the limbic system and the nucleus accumbens (reward pathway), develop earlier than the prefrontal cortex, which regulates critical reasoning and executive function. This neural developmental disjunction contributes to the risk taking and sensation seeking that are typical of teens, especially during so-called hot decision making.

Techniques such as Transcendental Meditation and other relaxation methods like mindfulness have been demonstrated to be effective in decreasing emotional and physiologic arousal that are the hallmarks of

anxiety and depressive disorders and so are potentially very helpful adjuncts in the treatment of these illnesses. More broadly, these techniques can also help alleviate the everyday emotional turmoil that is the universal experience of teens.

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## **ABSTRACT 2**

### **Transcendental Meditation in Child Behavioral Health**

Alex Kolevzon, MD

Professor of Psychiatry and Pediatrics at the Icahn School of Medicine at Mount Sinai;  
Clinical Director of the Seaver Autism Center and Director of the  
Child Behavioral Health and Science Center for the Mount Sinai Health System

This presentation will review the effects of Transcendental Meditation (TM) on behavioral health in children and adolescents. Epidemiological studies demonstrate that approximately 20% of children and adolescents are affected by mental illness yet around 80% do not have adequate access to treatment. The consequences of untreated mental illness are profound and can lead to school failure, drug addiction, and suicide. Despite this, families continue to report major obstacles in access to care, such as cost, convenience, and long wait times for providers. Policymakers interested in increasing children's access to mental health care must urgently adopt strategies to reduce barriers. TM is readily accessible, affordable, quick to learn, and relatively easy to master. Evidence from the literature will be presented showing the beneficial effects of TM in child and adolescent emotional health, including in reducing symptoms of anxiety, anger, fear, aggression, and sleep disturbance. TM is also associated with significant reductions in negative school-related behaviors, such as rule infractions, absenteeism, and days suspended. Finally, biological markers of TM using electroencephalography (EEG) will be explored, showing that TM is associated with changes in brain activity and increased EEG coherence across brain regions in children with attention deficit and hyperactivity..

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## **ABSTRACT 3**

### **Sleep and Mental Health Challenges in Young Adults**

Ana C. Krieger, M.D., M.P.H.

Chief of Sleep Neurology and Medical Director of the Center for Sleep Medicine;  
Professor of Clinical Medicine in the Departments of Medicine, Neurology,  
and Genetic Medicine; Weill Cornell Medical College

Sleep disturbances are quite prevalent in adolescents and young adults. In fact, the rate of sleep complaints in this group has markedly increased over the past decade. In the U.S., over 20% of adolescents report symptoms of insomnia, with higher rates seen in vulnerable groups, such as adolescents with depression, anxiety or ADHD. Other aggravating factors include underlying PTSD, chronic illness and low socioeconomic strata. Another important sleep disturbance in this population is insufficient sleep (aka

sleep deprivation), often associated with difficulty falling asleep and late bedtime which are very common behaviors in this group.

Most of us are well acquainted with the factors exacerbating sleep disturbance in this group, including the high demand of activities and stress related to academic and social performance as well as their use of social media and technology combined with a mismatch in their biological sleep cycles and expected schedules. The presence of underlying predisposition for mental health or neurodevelopmental disorders also plays an important role with an increase in social isolation.

The sleep disturbances in this group are intertwined with mental health, creating a bi-directional relationship. Beyond regulating hormonal and physical functions, adequate sleep is also critical for cognitive and behavioral development, including emotional regulation. Lack of adequate sleep increases the risk for mental health problems.

This unfortunate combination of factors, intersecting stress, sleep and mental health problems is quite obvious when we look at the statistics. These effects are visible worldwide and have reached a critical point. Urgent action is needed and a comprehensive approach needs to be taken into consideration, focused on prevention and treatment. Cognitive behavioral approaches have been the cornerstone for managing sleep disorders. Important tools include education, change in behaviors and the use of stress reducing techniques that can remediate and prevent insomnia.

Meditation is considered part of mind-body techniques that can promote self-awareness and self-regulation and is a tool of clinical value to help modulate behaviors and conditions that are associated with inadequate sleep. Mind-body approaches are key components for adolescent health in the UK.

Transcendental Meditation is an easy, safe and low-cost intervention that has been shown to reduce anxiety and reduce symptoms associated with stress. Scientific studies have shown that Transcendental Meditation (TM) increases the activity of the parasympathetic system (antidote for adrenaline) and can be quite a useful tool to offset stress-induced changes in sleep. A recent scientific study showed that TM was an effective intervention to improve wellness and sleep quality in High School students, also reducing levels of stress and anxiety.

Behavioral approaches like TM are useful and important tools to reduce stress and improve health and wellbeing of young adults, with the added benefit of reducing sleep and mental health problems.

Sleep and mental health disturbances are at critical levels in the U.S. Time is of essence when dealing with the emotional development of our young population. The effects of their untreated sleep and emotional problems will jeopardize our country's future. It is our obligation to provide them with appropriate tools and coping mechanisms to face the challenges of growing up in this complex environment. Empowering the young among us will guarantee a successful future for all.

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## **ABSTRACT 4**

### **The Path to TM—Exactly What Youth and Teens Need Now**

Mandy O'Hara, M.D., M.P.H., TCTSY-F, FAAP

New York Presbyterian Hospital, Child Advocacy Center;

Associate Professor of Pediatrics, Columbia University Medical Center

Dr. Mandy O'Hara, child abuse pediatrician in New York City, shares her path to meditation, ultimately “resting” in the effortless practice of daily TM, boosting her own resiliency both on and off the job. The more she learned about the scientific benefits of TM, the more she wanted it for her patients. With rising rates of child neglect and worsening severity of physical abuse, yet paradoxically low rates of child maltreatment reports since the pandemic, youth and teens went “under the radar,” and are now showing alarmingly high rates of anxiety, depression, and suicidality. Several studies comparing teens and young adults practicing TM to controls, have shown decreased anxiety, depression, anger, PTSD, and fatigue—exactly what youth need at this time. Teens who learned TM at both low and high-performance high schools had significant decreases in anxiety compared to controls, and college students both near (American University) and far (South Africa) had proven benefit from practicing TM in controlled trials, including decreased depression, PTSD, and increased coping. As Dr. O'Hara shares from her own experience, some benefits of TM are immeasurable, including addressing limitations of Western medicine that stop at disease treatment and don't empower the whole person to heal; increasing mindfulness to stay present no matter what—be it joy or distress; and increasing compassion which in and of itself shifts the nervous system toward greater wellbeing. Given the pandemic-driven mental health crisis in teens and young adults, there is no time like the present to expand efforts to train students, patients, and our workforces in TM.

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