

# Trauma, Music & the Breath

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## CHILD AND ADOLESCENT MENTAL HEALTH HAVE DECLINED GLOBALLY

Across the world, roughly five in seven children have experienced a traumatic life event, and one in seven children suffer from mental health challenges. During the pandemic, COVID-19-related stressors like social isolation, missed milestones, increased family tension and political unrest heightened anxiety and depressive symptoms among youth. Chronic stress and anxiety have lasting impacts on young people by disrupting the brain's developing architecture and creating adverse consequences for learning, behavior and health. Studies have also pointed to the effect of social inequality on depressive disorders and illuminated how children with the fewest resources are likely to be the most at risk of and worst affected by trauma.

Despite the prevalence of mental health challenges among young people, governments worldwide only allocate two percent of health expenditures to mental health care. There is a critical need for innovative, cost-effective approaches to providing public services that alleviate mental health challenges and foster youth wellbeing.

## EVIDENCE-BASED MUSICAL INTERVENTIONS SHOW PROMISE

A growing body of research supports the efficacy of musical interventions in treating trauma, anxiety and other mental illnesses because it stimulates the limbic system, which governs emotion, behavior and long-term memory. Targeting the limbic system with calming sounds can help soothe the same part of the brain

triggered during post-traumatic stress disorder (PTSD) episodes. A review of research on the neurochemistry of music concluded that listening to music was “more effective than prescription drugs in reducing anxiety prior to surgery” among patients studied.

In addition, a growing body of evidence shows the value of utilizing musical interventions for therapeutic outcomes. In a study in the Netherlands, school-based musical interventions helped refugee children develop a stronger sense of belonging. In France, researchers' review of studies on the efficacy of musical intervention has also yielded evidence of its positive effects on social functioning among youth with neurodevelopmental disorders. However, many policymakers and key decision-makers in childhood education require more data and evidence to make treatment programs more broadly accessible.

## MULTIDISCIPLINARY TEAM LAUNCHES NEW RESEARCH

Among those working to rigorously examine the potential of music to promote youth mental health is a multidisciplinary group of researchers at Northwestern University. The Trauma, Music and the Breath Global Working Group includes music education, vocal pedagogy, psychology, biomedical engineering and communication experts, all united by their mission to develop new approaches to addressing childhood trauma and the youth mental health crisis. The group was awarded two years of seed funding and support through a unique Idea Incubation Process at Northwestern University's

[Roberta Buffett Institute for Global Affairs.](#)

The Trauma, Music and Breath group is now gathering physiological and psychological data that could cement the promise of music as an effective intervention for therapeutic outcomes. The group completed a comprehensive analysis of existing literature on the relationships between music and wellbeing, which informed the design of a musical intervention to support children's mental health through group singing and breathwork. To measure the intervention's physiological effects, the group partnered with the [John Rogers Biomedical Engineering Lab](#) to use their proprietary, wearable sensors designed to wirelessly transmit data on heart rate variability, respiration, movement and speech rates. To measure the intervention's effects on children's sense of wellbeing, the group will use [WellCheq](#)—a wellness check-in survey app—before and after each intervention session.

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They will also interview children after each session to collect data on psychological measures of anxiety, their sense of belonging and their feelings of community. Ultimately, by introducing new data collection methods, researchers are gaining new insights into the physiological and psychological impacts of group singing and breathwork on mental health and wellbeing.

## DEVELOPMENTS TO WATCH

In the coming months, the Trauma, Music and Breath group will examine the effects of musical interventions on children's wellbeing across cultures. In partnership with the [International Centre for Community Music \(ICCM\)](#) at York St. John University, they will examine the effects of group singing and breathwork among children

at primary schools in York, United Kingdom. The group also forged a partnership with faculty at [Universidad Iberoamericana Ciudad de Mexico \(IBERO\)](#) and will examine the role of singing and breathwork in helping children cope with stress, anxiety and trauma at two elementary schools in Mexico City.



*Trauma, Music and the Breath group members and international partners observing the group's pilot study*

Music-based interventions are also gaining traction in eldercare settings. The National Institute on Aging has recognized [how music could play a role](#) in facilitating healthy aging and is funding further research. In addition, [new research](#) from the University of Geneva illustrated that music can play a role in preventing cognitive decline in older adults, while a study conducted in the United Kingdom showed [positive physiological changes](#) after music exercises, such as lower blood pressure and pulse rates. Another analysis of therapeutic programs offering singing interventions in 13 countries across five continents [established their benefits](#) for participants' wellbeing and mood.

Further research on how music and breathwork foster wellbeing is poised to drive momentum for the adoption of musical interventions in a broad spectrum of health care and educational settings. The Trauma, Music and Breath group will shed light on how music promotes the interaction of positive physiological and psychological responses in youth, providing a new window into how music and breathwork can support children's holistic health and wellbeing.