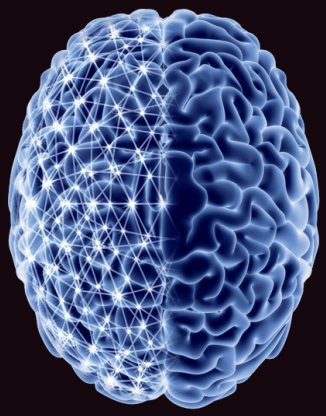
University of Massachusetts Medical School
UMASS

SEPT 2020

PRESENCE OF MIND

UMass Psychotic Disorders Clinical and Research Program



This issue:

CLINICAL

Going Virtual: Adapting to COVID-19

The COVID-19 pandemic has upended nearly every facet of day-to-day life. In clinical settings, traditional means of seeing patients and conducting research have been placed on pause. Kareem Hamada, an intern for the UMass Psychotic Disorders Program, published an article in the journal *Schizophrenia Research* exploring the impact of the pandemic on individuals with serious mental illness. Many of these individuals, as well as their families, now lack important social and emotional support, as months of isolation and social distancing measures have deprived them of regular contact with community health workers. Consequently, mental health issues often remain unaddressed. Healthcare workers, who are frequently the only point of contact for individuals with serious mental illness, also stay in need of support in order to prevent burnout and allow them to continue providing for their patients.

In response, the UMass Psychotic Disorders Program has switched to a virtual format via Zoom, telephone, and other online platforms. We established a COVID-19 Education and Support Program to ensure that individuals with serious mental illness, their families, and community health workers have the resources they need to get through this stressful time. We are currently providing free support and counseling sessions, along with COVID-19 education and training that focuses on ways to recognize the illness and minimize communal spread. Establishing a virtual space as an alternative to in-person meetings allows healthcare workers and those with lived experience to meet safely without risking potential exposure to the virus. Through programs such as this, those with lived experience, their families, and healthcare workers can continue to receive adequate support despite the ongoing pandemic - while working together to stop the spread.

For more information about the program, please go to https://www.umassmed.edu/covid19-SMI-support-education/
If you are interested in this study, please call 508-856-MIND (6463) or email MIND@umassmed.edu.

Hamada, K., & Fan, X. (2020). The impact of COVID-19 on individuals living with serious mental illness. *Schizophrenia research*.

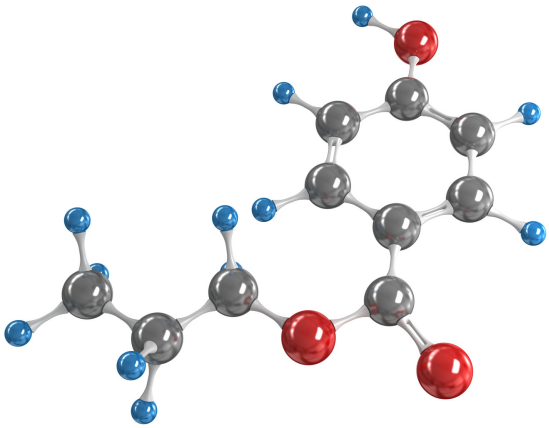
RESEARCH

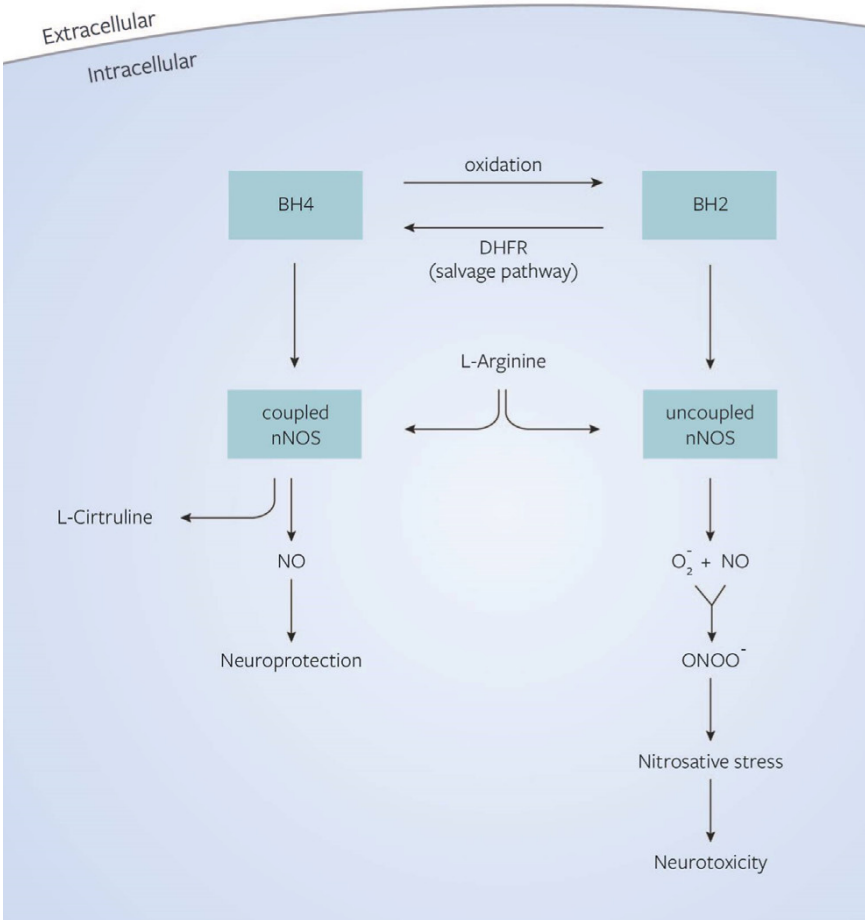
Nitric Oxide: Implications for Schizophrenia

Named as "Molecule of the Year" by the journal Science in 1992, nitric oxide has been a source of great controversy in the psychiatric community due to its mysterious and illusive nature. Paradoxically, nitric oxide supplementation has been associated with both neuroprotective as well as neurotoxic effects in the brain. Additionally, a large body of research suggests that nitric oxide abnormalities may be associated with schizophrenia.

In an earlier 2013 publication in JAMA Psychiatry, a Brazil research group reported that an intravenous infusion of sodium nitroprusside (SNP), a compound which releases nitric oxide when metabolized, produced rapid and persistent relief of schizophrenia symptoms. However, in a 2019 study published in the same journal, a group of researchers including us found no significant changes in schizophrenia symptoms in patients who had received the same SNP infusion treatment.

In a more recent publication by the UMass Psychotic Disorders Program, published in Schizophrenia Research, lead author and medical student Jackie Oh outlines the biological mechanisms of nitric oxide and proposes a novel therapeutic intervention strategy. In this article, we explain that the negative results found in the 2019 study were likely due the metabolization of nitric oxide into peroxynitrite, a potent oxidant which leads to neurotoxic effects.We propose that by using combination of L-arginine and tetrahydrobiopterin (BH4), we may be able to avoid this harmful metabolic pathway, more exclusively gleaning the beneficial therapeutic effects of nitric oxide(see figure). The UMass Psychotic Disorders Program plans to investigate this novel therapy in a clinical trial, hopefully thereby producing valuable knowledge for the future of schizophrenia treatment.





Brown, H.E., Freudenreich, O., Fan, X., Heard, S.O., Goff, D., et al., (2019). Efficacy and tolerability of adjunctive intravenous sodium Nitroprusside treatment for outpatients with schizophrenia: a randomized clinical trial. *JAMA Psychiatry*.

Oh SJ, Fan X. (2020). Current understanding on the role of nitric oxide and therapeutic potential of NO supplementation in schizophrenia. *Schizophrenia Research*.

COMMUNITY

Spreading Awareness: Early Detection & Intervention

This past June, the UMass Psychotic Disorders Program held its first successful virtual event: an educational webinar for college-aged adults about early psychosis in late adolescence and young adulthood. The goal of this webinar was not only to educate college students on signs, symptoms, and treatment options for people with psychosis, but to break the stigma surrounding the condition - aiming to spread awareness throughout the community and ensure that those experiencing symptoms receive treatment without delay. The latter aspect stands especially important for psychosis, as research finds that the duration of untreated psychosis is directly correlated with response to treatment, time to remission, and risk of relapse. The onset of psychosis typically occurs during late adolescence and young adulthood, coinciding with the typical age of college students. This makes the group an especially important target for spreading awareness and increasing detection efforts.

Using Zoom, Dr. Taylor Young, a Neurology-Psychiatry dual resident, presented to college students from the Worcester area about the signs of early psychosis and how to respond upon recognition. In addition, he discussed clinical services and resources for those experiencing symptoms. Dr. Young also included a variety of facts about the history of psychology in Worcester, displaying the community's involvement in mental health for decades and emphasizing the importance of that involvement to this day. His presentation embodied the personal empathy Dr. Young holds for his patients, as it opened students' eyes to how someone experiencing psychosis might feel and highlighted the need for peers to look out for one another. In the future, we hope to expand this initiative to colleges outside of Worcester and to provide psychosis-specific intervention training to counseling center faculty at local universities.

GLOBAL INITIATIVES

From Worcester to Wuhan: Serious Mental Illness & COVID-19

The Global Mental Health Case Conference Series was started in 2014 by the China Mental Health Program at UMass with the goal of providing a platform for real-time, interactive, and critical discussion of diverse psychiatric case presentations. These stories are shared amongst people from different cultural backgrounds, producing collaboration between diverse perspectives. This event is hosted biannually across alternating locations to contribute unique cases, including institutions such as UMass Medical School, the Shanghai Mental Health Center, and Tianjin Mental Health Center.

On May 28th, 2020 the UMass China Mental Health Program hosted its Global Mental Health Case Conference Series on Zoom, titled "The Impact of the COVID-19 Pandemic on Mental Health: A Special Forum with China." Conference attendees included members from the aforementioned institutions. Attendees shared their experiences regarding the impact of the COVID-19 crisis on psychiatry. Dr. Kaimin Zuo, one of the Shanghai participants, shared his experience of being sent to Wuhan, the epicenter of the pandemic, to provide acute psychiatric care during the peak of the outbreak.

From Worcester to Wuhan: Serious Mental Illness & COVID-19, cont.

His anecdotes brought attention to the stress that the current pandemic has caused for both healthcare workers and those with lived experience. After hearing Dr. Zuo's first-hand experience on the frontlines in China's epicenter, other mental health professionals from Tianjin and UMass shared their experiences. The Global Mental Health Case Conference uniquely provided a platform for mental health professionals from varying cultural backgrounds to share their experiences of providing the finest mental healthcare to some of the most vulnerable during these trying times.

ON-GOING RESEARCH

Study #1
The purpose of this study is to see whether brexpiprazole, a recent FDA approved antipsychotic medication to treat schizophrenia, may help reduce substance use in individuals who are living with schizophrenia or schizoaffective disorder. Docket # H-00014611

Study #2
The Negative Symptoms Study
The purpose of this research is to see if a new medication helps with day-today functioning, motivation, and negative symptoms in people with schizophrenia or schizoaffective disorder. Docket # H00016707

Study #3
Zentangle Project
This study will use the Zentangle method, a new mindfulness-based art therapy technique involving drawing repeating geometric patterns. The study will be investigating whether Zentangle can improve symptoms and daily functioning for individuals who have been diagnosed with schizophrenia or schizoaffective disorder for less than 5 years. Docket # H-00021046

If you or someone you know is interested in participating in a research study or clinical service, please call 508-856-MIND (6463) or email MIND@umassmed.edu.

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