



# MindView

JUNE 2021



IMPROVING THE  
QUALITY OF LIFE FOR  
VETERANS WITH  
PSYCHOSIS

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## MIRECC SCIENTIFIC SYMPOSIUM ON MOTIVATION WORKING TOWARD IMPROVED FUNCTIONING FOR VETERANS WITH SCHIZOPHRENIA

**Kara Fortier**

Diminished motivation is one of the most disabling symptoms for people with schizophrenia. It's easy to take for granted the drive to go out into the world, try new things, make friends, or find and keep a job. The brain's reward system plays a large role in motivation. When someone anticipates that they will be rewarded by a given activity, they will feel motivated to do it. But when people with schizophrenia engage in an activity that might be rewarding to others, they don't predict the same level of pleasure. Because they don't anticipate rewards like others do, they don't feel motivated to engage in beneficial activities, impacting their ability to live a full life and function in community.

Amotivation is a negative symptom of schizophrenia, meaning the person is lacking something that is ordinarily present in other people. Positive symptoms, like hallucinations and delusions, are perceptions or behaviors that are present in people with schizophrenia and not in other people. Most antipsychotic medications are less effective for negative symptoms than positive. This is problematic because people with schizophrenia have more functional consequences related to



negative symptoms than positive ones. Lack of motivation is one of the most disabling of them all.

For this reason, motivation has become a focus of study as researchers try to discover new ways to treat symptoms of schizophrenia. The mission of the VA Desert Pacific MIRECC is to improve functioning among Veterans with psychosis, and motivation touches every aspect of the Center's research. Therefore, we held a MIRECC Scientific Symposium on Motivation on January 13-14, 2021. The purpose of the

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## MIRECC SCIENTIFIC SYMPOSIUM ON MOTIVATION (CONT'D. FROM PAGE 1)

symposium was to share our work in order to stimulate collaborations across units, sites, and investigators.

Day one of the symposium focused on basic and translational approaches to motivation and research that seeks to understand the brain mechanisms involved. Presenters shared animal and human studies that looked at neural circuits and systems that underlie motivation-type behavior. In her keynote presentation, Dr. Deanna Barch, of Washington University in Saint Louis spoke about the mechanisms of motivational impairment in psychosis and how we can learn more about these with functional neuroimaging techniques and laboratory studies of behavior.

Drs. Jared Young and Sam Barnes, of the Neuropsychopharmacology Unit, spoke about their work with animal models - studying how much effort one is willing to put out in order to get a reward. Translational studies using similar methods in humans found that people with schizophrenia aren't willing to work as hard for a given level of reward because they don't anticipate the same level of pleasure from the reward as those without schizophrenia do.

The second day focused on clinical and community approaches to motivation. Presentations by Drs. Junghee Lee and Jonathan Wynn examined social motivation as well as the role of motivation in community reintegration of homeless veterans.

One of the most difficult problems is that people with schizophrenia struggle to find motivation to seek and stay in treatment. Dr. Noosha Niv, Director of the Education and Dissemination Unit, spoke about Motivational Interviewing strategies to increase motivation in treatment. The goal of this strategy is to help people with schizophrenia identify their own reasons and rewards for taking a given action, such as setting up an appointment with a therapist. Dr. Felice Reddy described her work in applying Motivational Interviewing to the treatment of negative symptoms for schizophrenia.

Through our efforts at the symposium to share research and treatment methods, we identified a disconnect between the basic science and the applied, clinical work. Our current laboratory measures don't reliably predict motivation-oriented behaviors like who's going to stay in treatment or get a job. Our next step will be to write a paper to identify this disconnect by reviewing what's been done in the basic science of motivation, pointing out the work that is needed to link the science and the applied work together, and then share our opinion about what that effort might look like.

### Day 1: Basic & Translational Approaches to Motivation

#### Keynote

Mechanisms of motivational impairment in psychosis - Deanna Barch PhD, Departments of Psychological & Brain Sciences, Psychiatry, and Radiology, Washington University

Translational studies on reward responsivity and the willingness to exert effort - Jared Young PhD, Co-Director, VISN 22 MIRECC Neuropsychopharmacology Unit

Circuits underlying motivation and reward processing - Samuel Barnes, PhD, Investigator, VISN 22 MIRECC Neuropsychopharmacology Unit

### Day 2: Clinical & Community Approaches to Motivation

Role of motivation in community reintegration in homeless veterans with and without psychosis – Jonathan Wynn, PhD, Investigator, VISN 22 MIRECC Treatment Unit

Toward a neural basis for social motivation in psychotic disorders – Junghee Lee, PhD, Department of Psychiatry and Behavioral Neurobiology, University of Alabama at Birmingham

Measuring motivation in treatment - Noosha Niv, PhD, Director, VISN 22 MIRECC Education and Dissemination Unit

An integrated MI and CBT intervention for negative symptoms in schizophrenia– Felice Reddy, PhD, Assistant Research Psychologist, Department of Psychiatry and Biobehavioral Sciences, University of California, Los Angeles



# CBTp: NEW OPTIONS FOR VETERANS WITH PSYCHOSIS

## **Kara Fortier**

Medication is a mainstay for people with psychotic disorders. However, many people continue to have symptoms even if they're on an adequate dose of antipsychotic medications and appear to be taking them regularly. This prompted researchers in the U.S. and U.K. to think about whether it might be useful to address these symptoms directly using Cognitive Behavioral Therapy.

Cognitive Behavioral Therapy for psychosis (CBTp) was originally pioneered by Dr. Aaron T. Beck in the early 1950s, but it became more widely developed in the U.K. in the 1980s and 90s. One of the most prominent investigators exploring CBT for psychosis is Dr. Eric Grandholm at the Veteran's Administration in San Diego, California.

The approach is based on the gentle challenging of problematic beliefs. It has shown improvements in symptoms, including hallucinations, negative symptoms, thought disturbances, and delusions. CBTp can also lead to improved functioning in people with psychotic disorders. The intervention has been widely studied throughout the world with many positive outcome trials, but it also has critics. One challenge in evaluating the strength of the intervention is that it's been tested in varying situations, making it difficult to compare data across studies.

For instance:

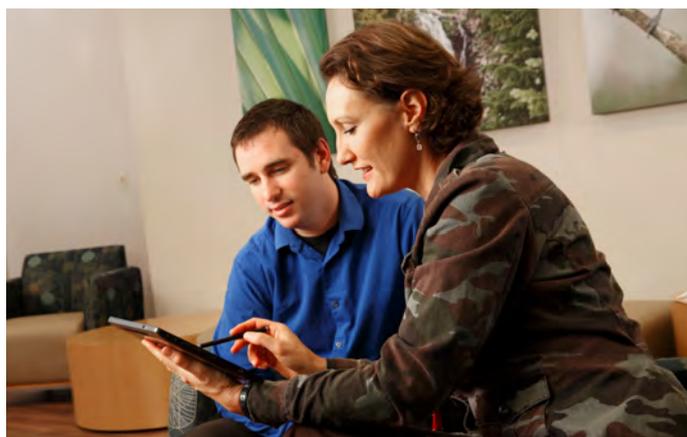
- Some studies compared inpatient versus outpatient interventions.
- Some studies were only four weeks long while some lasted a year.
- Some studies included a variety of psychotic diagnoses while others focused solely on schizophrenia.
- Some studies emphasized symptom outcomes while others focused on functioning.

Nonetheless, CBTp is a clinically validated intervention for psychosis with research indicating a 50-65% reduction in symptoms when used in combination with medication. There are now several published manuals on how to conduct CBTp, and interest has been increasing among VA clinicians in obtaining formal training.

In recognition of this interest, VISN 22 MIRECC is leading two initiatives:

1. We are mounting a pilot training program for VA clinicians in CBTp in collaboration with the VISN 2 MIRECC. These two-day workshops will begin in July 2021.
2. We will also be offering CBTp through the National TelePsychosis Program led by the VISN 22 MIRECC and funded by the VA National Telemental Health Center. Seasoned VA providers will be offering treatment remotely throughout the country to facilities that don't have sufficient providers trained on staff.

Contact Noosha Niv, PhD ([noosha.niv@va.gov](mailto:noosha.niv@va.gov)) if you would like to be informed of future training opportunities.



# COGNITIVE TRAINING IN SERIOUS MENTAL ILLNESS

Noosha Niv, PhD, Yash Joshi, MD, PhD, Gregory Light, Ph.D.



Have you ever had the experience of forgetting or misplacing items, having difficulty completing tasks, or not knowing how to start a task? These are examples of cognitive problems. These experiences happen to everyone, but for people living with serious mental illnesses (SMI) such as schizophrenia, schizoaffective disorder, and bipolar disorder, problems with thinking, learning, and memory can be worse. Even with comprehensive treatment, many Veterans with SMI have cognitive symptoms that do not remit, resulting in an overall reduced quality of life and difficulties in managing school, acquiring new skills, keeping jobs, and maintaining social connection.

The terms “cognitive training,” “cognitive remediation,” and “cognitive rehabilitation” are often used to describe programs that aim to reduce problems with cognition. A growing body of research shows that cognitive training can be effective for improving concentration, memory, and problem-solving. Cognitive training may also reduce psychiatric symptoms (e.g., hallucinations) and improve social, work, and school functioning.

Just as there are many different types of physical exercise, there are many different cognitive training approaches. Investigators in the VISN 22 MIRECC have conducted research in an effort to understand which type of approach would be most effective for individuals with SMI. They are now turning their attention to who would most benefit from cognitive training. Dr. Gregory Light found that a computerized, targeted cognitive training program significantly

reduced hallucinations, improved verbal learning, attention, and memory, and increased participation in psychosocial groups and activities. Unfortunately, nearly one out of three patients did not experience benefits from the treatment. His research recently showed that laboratory tests of brain function measured prior to treatment were strong predictors of who would and who would not benefit. His current research continues to examine this question. He is also testing if adding memantine, an FDA approved medication for the treatment of cognitive dysfunction in Alzheimer's Disease, would improve response to cognitive training.

Cognitive training is currently not available at VA and is difficult to find in clinical settings. If you are interested in trying it with the help of a professional, you might be able to find a research study to participate in. These studies typically happen at VA facilities or research universities.

Many commercial cognitive training programs are also available for those who want to do it on their own. It is often difficult to tell if a program is actually made to treat cognition instead of simply being a computer game. Many programs have misleading advertisements or exaggerate their results. When looking for a commercial program to purchase, look for programs that are being studied at VA facilities and research universities and have research results published in peer-reviewed, scientific journals. Search for programs that have been specifically studied for individuals with SMI rather than for the general population or other conditions.

To learn more about the types of cognitive training and the conditions necessary to benefit from it, download our education handout at <https://www.mirecc.va.gov/visn22/cognitive.asp>.



# PRESENTATIONS



Dr. Noosha Niv conducted six workshops on **Motivational Interviewing (MI)** for clinicians at the West Los Angeles VA and researchers at UCLA. If you are interested in MI training, please contact Dr. Niv at noosha.niv@va.gov.

Dr. Lisa Eyler presented **Advanced Brain Age and its Clinical Correlates in Bipolar Disorder: Evidence from Global and Local Imaging Data** at the American College of Neuropsychopharmacology Annual Meeting, December 2020.

Dr. Stephen Marder presented **Practical Clinical Update: Health Issues for People on Antipsychotics** at Semel Institute Grand Rounds, Los Angeles, September 2020.

In January 2021, we held the **VA Desert-Pacific MIRECC Scientific Symposium on Motivation**. The mission of the symposium was improving functioning among Veterans with psychosis by clarifying concepts and definitions and sharing work in order to stimulate collaborations across units, sites, and investigators. To learn more about this event, refer to MIRECC Scientific Symposium on Motivation, Working Toward Improved Functioning for Veterans with Schizophrenia on page 1.

# PUBLICATIONS



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# MENTAL ILLNESS RESEARCH, EDUCATION AND CLINICAL CENTER

VA Desert Pacific Healthcare Network  
Long Beach VA Healthcare System  
Education and Dissemination Unit 06/116A  
5901 E. 7th Street  
Long Beach, CA 90822

## DIRECTOR

Stephen R. Marder, MD

## DEPUTY DIRECTORS

Gregory Light, PhD  
Noosha Niv, PhD

## MINDVIEW EDITOR

Noosha Niv, PhD

## VISIT US ON THE INTERNET AT:

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