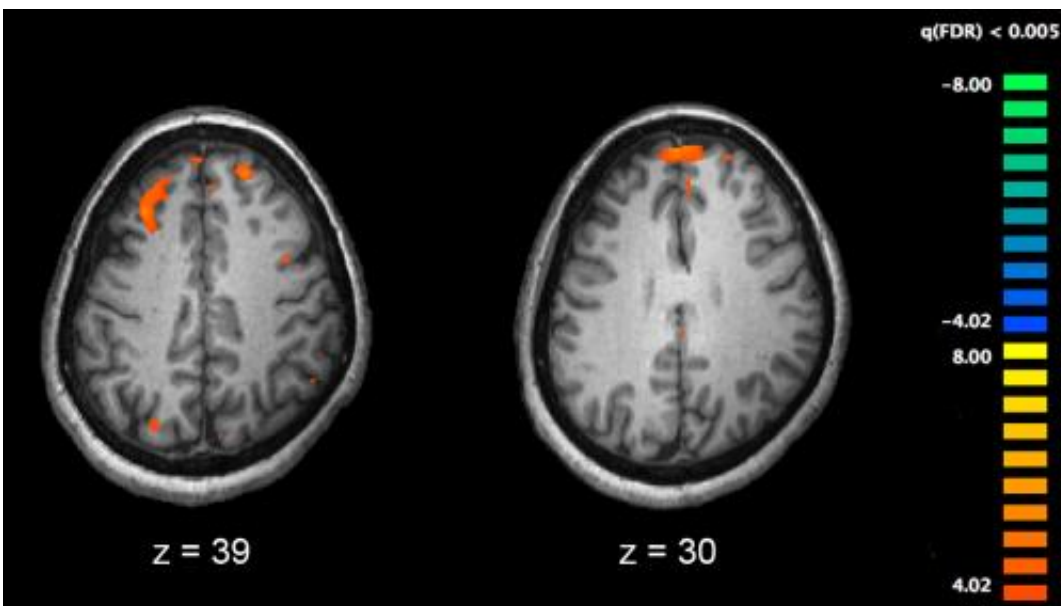


Study provides hope that schizophrenia isn't as deep-rooted in affected individuals as previously believed

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Functional magnetic resonance imaging (fMRI) and other brain imaging technologies allow for the study of differences in brain activity in people diagnosed with schizophrenia. The image shows two levels of the brain, with areas that were more active in healthy controls than in schizophrenia patients shown in orange, during an fMRI study of working memory. Credit: Kim J, Matthews NL, Park S./PLoS One.

A schizophrenia patient's own perceptions of their experiences—and confidence in their judgments—may be factors that can help them

overcome challenges to get the life they wish, suggests a new paper published in *Clinical Psychological Science* from researchers at Penn Medicine's Aaron T. Beck Psychopathology Research Center. The findings buck a commonly-held belief about the relationship between so-called "cognitive insight" and neurocognitive performance (behavioral measures of attention, memory, etc.) that have important implications for treating the disorder.

Cognitive [insight](#), measured using the Beck Cognitive Insight Scale, tested individual's self-reflectiveness and confidence in their interpretations of experiences.

Participants were asked to rate statements, such as "I have jumped to conclusions too fast," on a scale from (0) "do not agree at all" to (4) "completely agree." Neurocognitive performance was assessed with the University of Pennsylvania Computerized Neurocognitive Battery that uses a series of behavioral tasks.

In two separate, prospective studies involving a total of 228 participants diagnosed with [schizophrenia](#) or schizoaffective disorder, researchers found that cognitive insight is a significant predictor of neurocognition (and not vice versa, which previous studies have suggested). For example, lower self-reflectiveness and greater overconfidence in judgments (low cognitive insight) are more likely to result in poorer neurocognition in the future. Similarly, improvement in self-reflectiveness and overconfidence predict improved neurocognitive performance in the future. These results suggest that improving cognitive insight may directly improve performances on laboratory and real-world tasks, the authors suggest.

"The relationship between the two is important because it presents a promising opportunity to improve outcomes for individuals diagnosed with schizophrenia, many of whom experience long periods of disability,

not to mention the 1.5 million new people who are diagnosed with schizophrenia worldwide every year," said Paul M. Grant, PhD, a research assistant professor of Psychology in the department of Psychiatry in the Perelman School of Medicine at the University of Pennsylvania, and senior author of the study.

"There's a lot of effort in the schizophrenia field to help people through what's called cognitive remediation, which is basically a bottom-up process of learning, memory and attention," Grant said. "But we think that having interventions that target positive and negative beliefs, along with goals, would be key in terms of helping the individuals have better lives, the lives that they want." One intervention is called recovery-oriented cognitive therapy (CT-R), a hands-on, active approach that focuses on life aspirations, successful goal achievement, development of resiliency in the face of stressful symptoms and life events, all to promote positive beliefs and neutralize negative attitudes. CT-R was created by Grant, along with Aaron T. Beck, MD, an emeritus professor in the department of Psychiatry at Penn, and co-author on the study.

A June 2017 study in the journal *Psychiatric Services*, authored by this same team, found that CT-R is effective in individuals with schizophrenia who are functioning poorly. The study was a follow up to a randomized clinical trial and showed that participants who received CT-R for 18 months, as compared to those who received standard treatment (e.g., anti-psychotic medications, case management), showed major improvements in daily functioning, motivation and psychotic symptoms that endured after the therapy was completed. Importantly, those with the longest course of illness showed improvement by the end of the study.

"Some of what produces the disability is related to how individuals think about the disability. And that thinking is quite changeable," Grant said. "CT-R does indeed adjust beliefs, so that would be one of the main

therapies we would suggest practitioners to implement." The researchers called for further studies to not only replicate these findings but to also examine the clinical ratings of metacognition - higher order thinking involved in learning - and behavioral engagements when investigating the relationship between insight and cognition.

"Often times, individuals think there is something fundamentally wrong with them that can't be changed," Grant said. "This paper provides hope that the problem isn't as entrenched or as stable as it might seem, or that it's a devastating and unremittable disorder."

Provided by Perelman School of Medicine at the University of Pennsylvania

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