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## Benefits of CET Intervention for Schizophrenia Persist at Least 2 Years

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November 25, 2009 — People with early-stage schizophrenia show a robust and persistent response to a form of cognitive rehabilitation called cognitive enhancement therapy (CET), investigators reported in the November 2009 issue of *Psychiatric Services*.

Compared with patients receiving standard enriched supportive therapy (EST), people in the CET group showed greater improvements in social cognition, cognitive style, social adjustment, and symptomatology composites during the first year of treatment, and differences extended into the second year. Patients in the CET group also demonstrated better neurocognitive function during the second year.

In addition, patients in the CET group were significantly more likely to find and maintain paid, competitive employment, "so there was real-world improvement as well," senior author Matcheri S. Keshavan, MD, professor of psychiatry at Wayne State University in Detroit, Michigan, told *Medscape Psychiatry*.

### Comprehensive Cognitive Rehabilitation

This study is one of the first to examine the long-term effects of a comprehensive cognitive rehabilitation program in this patient population, the authors wrote. They concluded that early cognitive rehabilitation might provide "the critical ingredients needed to help individuals recover from this disorder."

CET involves an evidence-based, stepwise approach that strengthens "the basic neural building blocks of cognition," said Dr. Keshavan. The goal of CET is to improve social and nonsocial cognitive functioning, such as reasoning, problem solving, and speed of thinking, through a variety of techniques, including group and individual therapy, computer-assisted training, and homework assignments. It was developed in the 1990s by the late Gerard Hogarty, MSW.

The study participants were 58 outpatients who met the criteria for schizophrenia, schizoaffective disorder, or schizophreniform disorder but were still in the early stages of their illness. Their average age was 26 years. There were 40 men, comprising 69% of the study population. Forty-five (78%) had been ill for fewer than 5 years. All of the patients were taking antipsychotic medication and were monitored at least biweekly by a clinical nurse specialist.

The patients were randomly assigned to the CET or EST group. People undergoing CET typically had weekly neurocognitive training sessions in attention first. After 3 months, they also started attending weekly social-cognitive groups, where they engaged in exercises designed to improve social skills.

For example, clinicians taught the patients to identify nonverbal cues or to put themselves in someone else's place to gain perspective on other people's feelings, Dr. Keshavan said. "This helps the individual learn how to act appropriately in different interpersonal situations." He referred to this technique as "gistful abstraction: the ability to grasp the main point in an interaction."

Successful performance of this task requires the capacity to think abstractly and identify the main point of a conversation or a newspaper article. "Many patients tend to get lost in the forest, without getting the big picture," Dr. Keshavan pointed out.

### **Stress Management**

Patients in the EST group learned stress management techniques and other behavioral methods focused on avoiding relapse and enhancing adjustment. The EST had 2 phases: in phase 1, patients learned basic facts about schizophrenia and the role of stress in exacerbating symptoms. They also learned simple stress-reduction techniques. In phase 2, patients learned how to identify and cope with stressors that they found particularly threatening to their social or cognitive function. Both programs lasted 2 years, followed by annual neurocognitive and social-cognitive assessments.

"Basically, we found that CET was highly effective, compared to supportive psychotherapy, in all of the key domains of executive function and social cognition," Dr. Keshavan said.

Compared with patients receiving standard EST, people in the CET group showed greater improvements in social cognition ( $P < .001$ ), cognitive style ( $P = .023$ ), social adjustment ( $P = .001$ ), and symptomatology composites ( $P = .042$ ) during the first year of treatment, differences that extended into the second year. Patients in the CET group also displayed better neurocognitive function ( $P = .023$ ) during the second year.

With its regular meetings and homework assignments, CET required a significant commitment from the participants, but the patient retention rate was high throughout the 2-year program. "Our observation was that once the patients stayed for the initial part of the intervention, our ability to keep them for the subsequent part of the therapy was very high: about 80% to 90% of the patients stayed. Some of them may not have appeared that motivated to begin with, but as they saw the benefits of the intervention, they stayed on," Dr. Keshavan said.

### **Sustained Effects**

These findings are noteworthy in part because of their duration, said Stephen Marder, MD, professor and director of the section on psychosis at the Semel Institute at the University of California, Los Angeles, and director of the Mental Illness Research, Education, and Clinical Center at the Veterans Administration of Greater Los Angeles. "I don't recall another paper that looked for effects going into 2 years. It indicates that this kind of psychosocial intervention does have sustained effects over a 2-year period."

The improvements in social cognition and functional outcomes are particularly striking "because that's really what this treatment is targeting," said Dr. Marder, who was not involved in the research. "All in all, I think it is a very encouraging paper."

*Dr. Keshavan and Dr. Marder have disclosed no relevant financial relationships.*