

**Title** Neurocognitive enhancement therapy with vocational services: Work outcomes at two-year follow-up

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**Target Population** People diagnosed with schizophrenia

**Key Words** Vocational rehabilitation, neurocognitive enhancement therapy, schizophrenia

**Brief Description** Cognitive exercises in combination with traditional vocational rehabilitation methods have been found to be more effective than vocational rehabilitation methods alone in obtaining vocational outcomes (e.g., employment rates, hours worked) for people diagnosed with schizophrenia.

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## Article Summary

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Recent research indicates that neurocognitive enhancement therapy (NET) plus vocational rehabilitation (VOC) can increase work hours and employment rates of people with schizophrenia.

The study, which was published in *Schizophrenia Research*, compares NET (neurocognitive enhancement therapy) plus VOC (vocational rehabilitation services) to VOC alone in 72 patients. All participants met diagnostic criteria for diagnoses of schizophrenia or schizoaffective disorder based on the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV).

A community mental health center in a large urban area administered the vocational rehabilitation program, which consisted of using State transitional funds to facilitate job placement. Job specialists placed participants in community-based employment when employers indicated willingness to hire and use this funding to pay the participants. VOC participants also attended work and lifestyle support groups conducted by research staff. Work support groups featured discussion of work-related issues, and lifestyle groups covered social concerns such as handling their new income and other topics raised by participants. Participants in NET + VOC received these same services, as well as up to 10 hours of computerized cognitive exercises per week and two group meetings per week that covered work feedback and social information-processing. The computerized exercises involved participants completing cognitive remediation exercises to improve attention, language, memory, and executive function. These exercises were easy at the start of the program and progressively got more difficult. Participants were paid minimum wage for engaging in these exercises. Work feedback during group meetings consisted of specific feedback from formal evaluations that was then used to create weekly goals. Social information-processing during group meetings consisted of one member presenting on a work-related topic while others in the group provided feedback.

Bell and colleagues found that 44.7% of the participants who received NET + VOC were employed during the last quarter of the intervention period, while only 23.5% of those in VOC were employed. Overall, employment rates for VOC only participants declined gradually during the second year of intervention. In addition, NET + VOC showed longer lasting effects. Participants in NET + VOC worked more hours and had higher employment rates than those who received only VOC. However, the effect size for work hours was small, and specific

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details were not provided for employment rates during follow-up. Employment took place in jobs that paid at least minimum wage, were in a mainstream setting, and were not specifically earmarked for mental health consumers or contracted with a social service agency. A more detailed description of the results, including measures that were not statistically significant, can be found in the article.

This study highlights the need to enhance traditional vocational rehabilitation services to successfully employ people with schizophrenia. This research furthers the recommendation that it is necessary to provide cognitive training in addition to VOC in order to produce better outcomes regarding hours worked and employment rates. Cognitive training should include exercises requiring the use of attention, language, memory, and executive function that start easy and progressively get more difficult as participants successfully complete sessions.

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