

**Title** Cognitive training for supported employment: 2–3 year outcomes of a randomized controlled trial

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**Target Population** Individuals with severe mental illness

**Key Words** Cognitive training, Thinking Skills for Work, severe mental illness, employment

**Brief Description** A cognitive training program called Thinking Skills for Work provided along with supported employment services has demonstrated improved work outcomes (i.e., jobs worked, weeks worked, total wages, hours worked) as compared to supported employment services alone for individuals with severe mental illness.

## Article Summary

Research indicates that adding a cognitive training program to supported employment can increase several work outcomes, such as hours worked, weeks worked, jobs held, and earned wages for persons with severe mental illness.

This study, published in the *American Journal of Psychiatry*, compared an intervention called Thinking Skills for Work plus supported employment services to supported employment services alone. Study eligibility criteria included being diagnosed with a severe mental illness (i.e., schizophrenia, schizoaffective disorder, mood disorder), current unemployment, desire for employment, enrollment in supported employment, having a history of at least one unsatisfactory job termination, and willingness and capacity to provide informed consent. Eighty-six percent of the participants ( $n = 38$ ) had been prescribed anti-psychotic medications. Forty-four participants were randomized into either the intervention group ( $n = 23$ ) or the comparison group ( $n = 21$ ). Services were provided at two urban community-based rehabilitation centers.

Thinking Skills for Work is a training intervention that provides cognitive remediation and helps people develop compensatory strategies for cognitive impairments through four components: (1) cognitive assessment and job loss analysis, (2) computer-based cognitive training, (3) review and discussion of gains following training and planning, and (4) ongoing consultation between an employment specialist and the participant. The cognitive assessment and job loss analysis component is intended to help participants understand how issues with cognitive functioning may have interfered with job performance in the past and motivate them to participate in the training program. The computer-based training component is intended to increase attention and concentration, learning and memory, and executive functions through a 24-hour long program that is delivered in 45-60 minute sessions two to three times weekly over a 12-week period. Gains made during this training and planning for future jobs are discussed with the participant as part of the third component. Finally, the ongoing consultation component is conducted with an employment specialist to develop additional compensatory strategies to manage any cognitive impairments that interfere with job performance. The intervention is delivered by a cognitive specialist who works alongside an employment specialist.

McGurk and colleagues collected measures on work outcomes (e.g., total number of jobs, hours worked, wages earned) throughout a follow-up period of an average of 26.8 months for the intervention group and 24.3 months for the comparison group. Participants and their vocational counselors reported these work outcomes numerous times throughout the follow-up period. The researchers also administered the Positive and Negative Syndrome Scale at baseline and after three months to assess depression symptoms.

Results of the study indicate that participants in the intervention group worked more than those in the comparison group, with 16 of the 23 participants in the intervention group reporting that they worked during the follow-up period compared to 3 of the 21 participants in the comparison group. Additionally, participants in the intervention group had significantly better mean outcomes in several areas compared to the comparison group

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participants during the follow-up period: (a) total number of jobs worked (1.35 versus 0.14), (b) total number of weeks worked (27.01 versus 5.38), (c) total wages (\$5,320.19 versus \$530.18), and total number of hours worked (848.58 hours versus 94.64 hours). The participants in the intervention group also showed decreases in depression over the three-month training period.

A limitation of this study is that cognitive functioning and symptoms were not evaluated at the 2-3 year follow-up period, so it is uncertain what factors led to the improved vocational outcomes. The small sample size limits confidence in the results. Also, it is important to note that work outcomes differed significantly between sites, and that the site with lower outcomes implemented the supported employment model with less fidelity. Study strengths include that it was conducted in two typical treatment settings serving predominantly disadvantaged, minority persons with low educational levels and that it focused on those who had failed at previous employment. Results of this study support testing the addition of cognitive training to supported employment services to improve employment outcomes for persons with severe mental illness in a larger trial. It also supports monitoring outcomes over a follow-up period of two to three years to more accurately assess results.

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