

Combining interventions to foster recovery in Severe Mental Illness

A Cognitive Remediation and tDCS pilot trial.

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BACKGROUND

The majority of people with a severe mental illness (SMI) show serious cognitive impairments that cause deficits in daily functioning. **Cognitive enhancement interventions** can improve cognitive functioning, which may ultimately result in improved daily functioning.

Cognitive remediation (CR)

Aim to improve cognitive functioning by

- repeated practice of adaptive exercises
- support & guidance from trained therapist
- developing problem-solving strategies
- transfer of learned skills to daily life

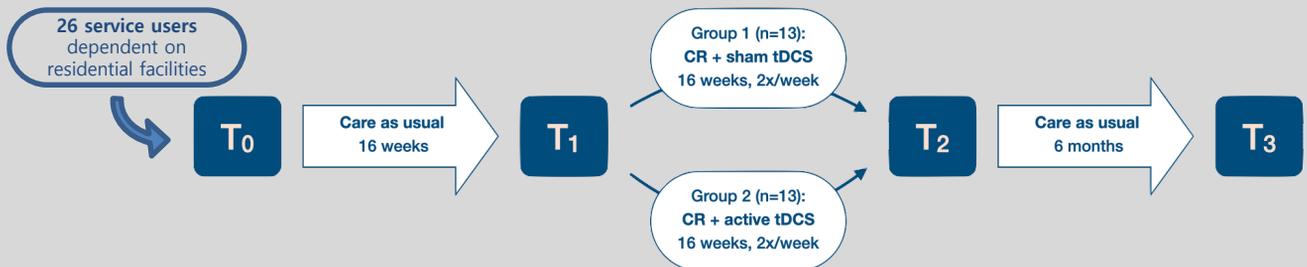


Transcranial Direct Current Stimulation (tDCS)

Aim to improve cognitive functioning by applying a weak current across the scalp to modulate brain function.

Study aim This pilot trial will investigate whether CR on its own, or in combination with tDCS, is a **relevant and feasible intervention** to improve functioning in people with SMI.

METHOD



CR program: CIRCuiTS¹

Computerized Interactive Remediation of Cognition and Thinking Skills

- Personalized training based on individual goals
- Targets meta-cognition
- Ecologically valid tasks

tDCS

Aim to stimulate fronto-parietal brain networks
Target area: left DLPFC

Anode: F3
Cathode: F4

2 mA
20 min during CR

Primary outcome

Functional outcome: Life Skills Profile (LSP)

Secondary outcomes

- Cognitive functioning
- Feasibility
- Acceptability
- Clinical functioning

If the results of this pilot trial indicate trends towards improved cognitive and daily functioning, we will extend the trial into a **multi-centre randomized controlled trial**. This trial contributes to the **development of new interventions** that foster functional recovery of service users with severe mental illness living in residential facilities.