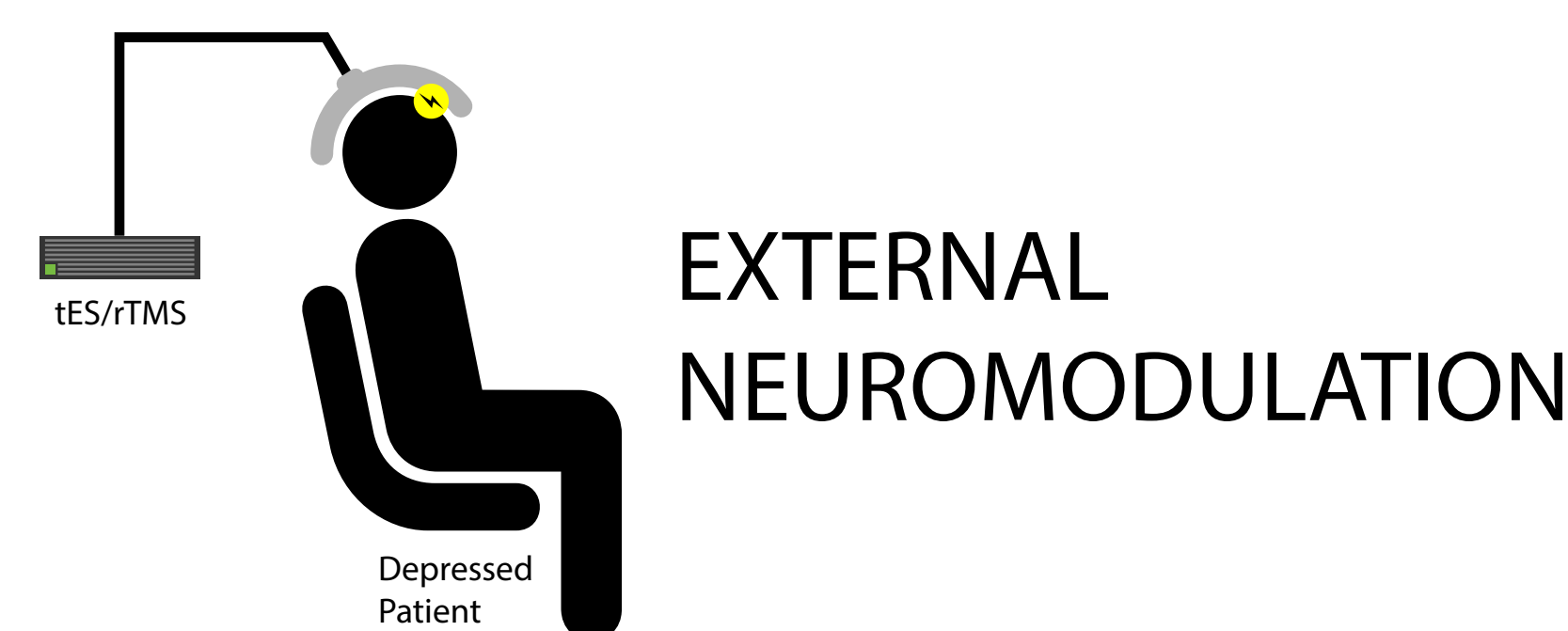


Reliable and rapid relief of treatment resistant depression by facilitated ketamine infusion

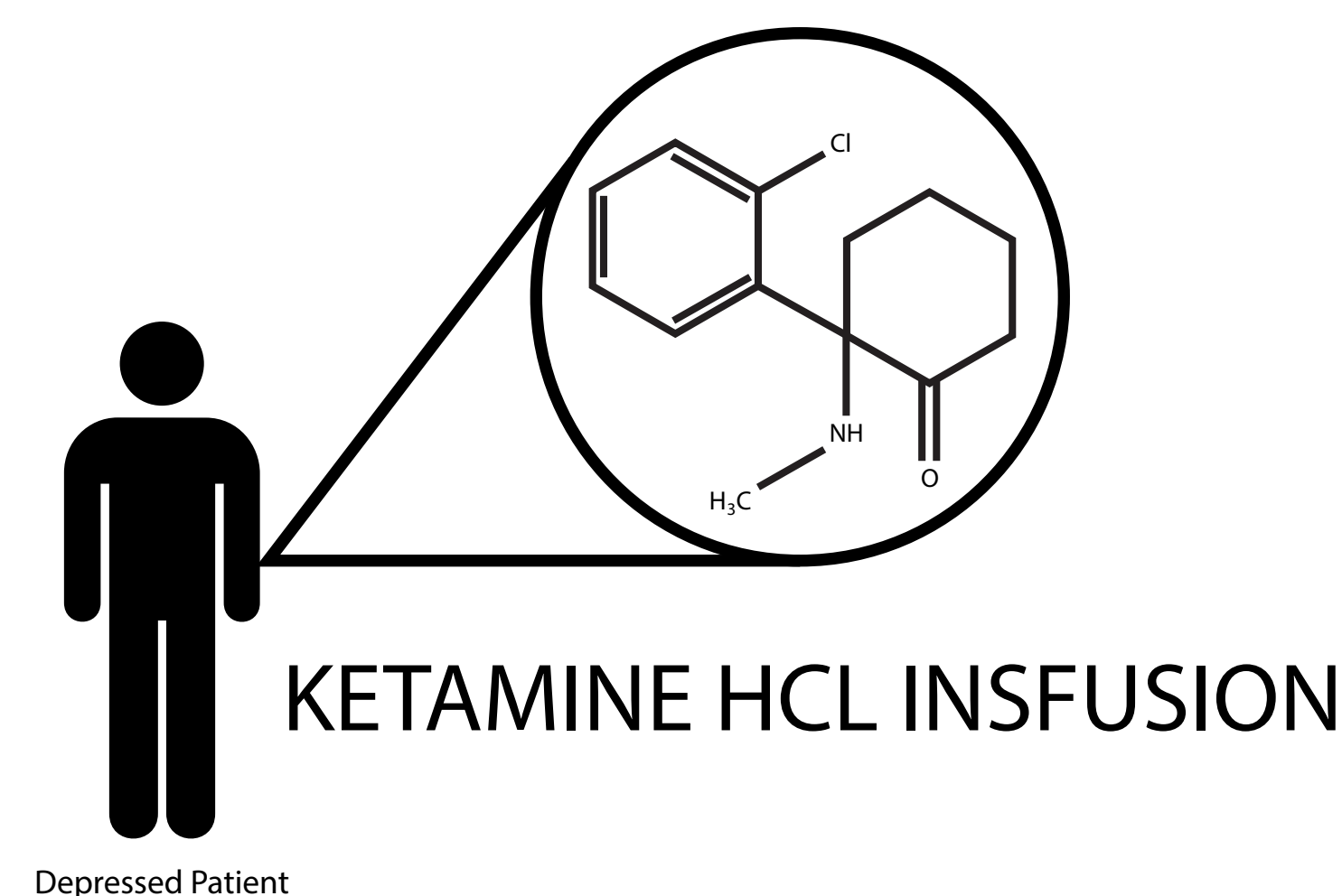
Steven Richard Devore Best
The Neuroscience Center, Deerfield, IL

Introduction

- 1 Depression is characterized by depressed mood, inability to experience pleasure, sleep and appetite disturbance, concentration difficulties, among other deficits.
- 2 Research shows that many depressed individuals fail to respond to treatment with one or more antidepressant medications, prompting researchers to examine alternate treatment methods.
- 3 Research has shown that depression can be ameliorated by various forms of external neuromodulation including transcranial low voltage electrical stimulation (TES) and repetitive transcranial magnetic stimulation (rTMS).



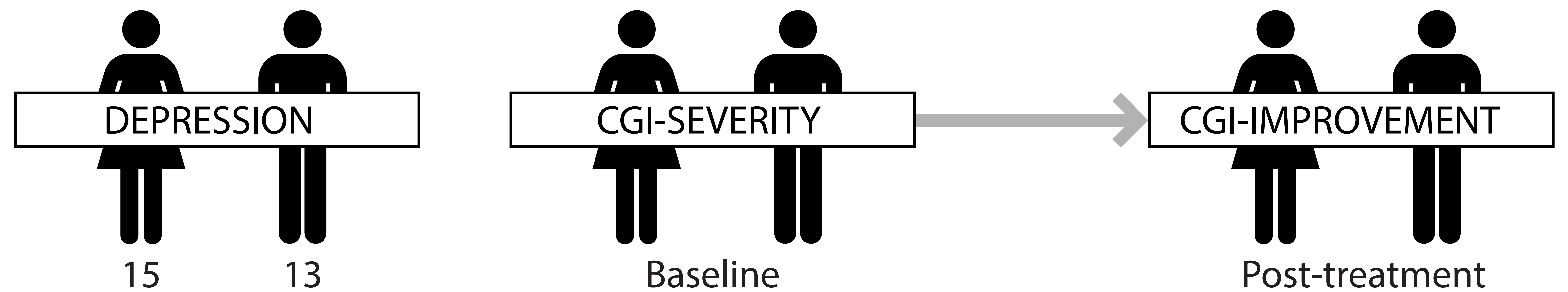
- 4 Research has also implicated the dissociative anaesthetic drug ketamine in the alleviation of depression symptoms.



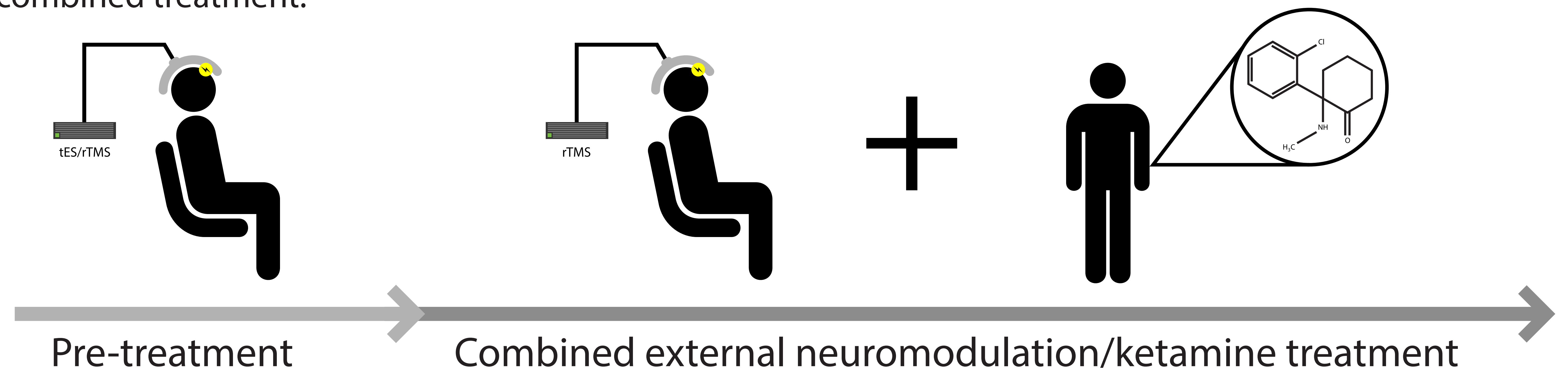
- 5 In the current study, we examined whether TES/tMS and infused ketamine might work synergistically to alleviate treatment resistant depression (TRD).

Method

- 1 Participants included 15 female and 13 male participants with TRD.
- 2 Participants were assessed at baseline for depression symptomatology and again at post-treatment using the Clinician Global Impression Scale TRD.

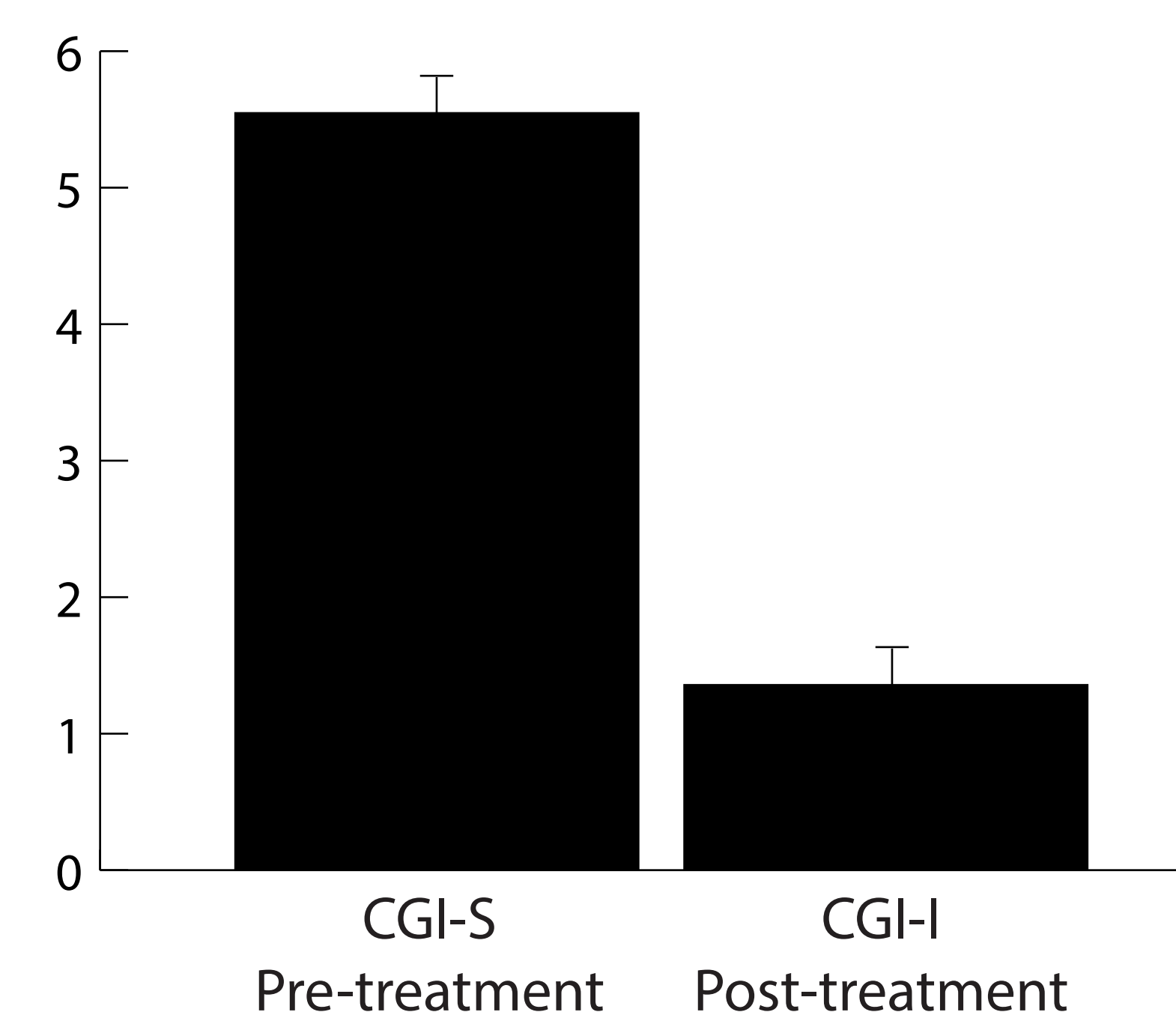


- 3 Participants received combined external neuromodulation/ketamine treatment for a minimum of one month. Twenty participants received intensive rTMS treatment (3x/day for 3-14 days) that preceded the combined treatment.



Results

- 1 As a group, participants exhibited significant improvement in psychosocial functioning.



Conclusions/Limitations

- 1 Our findings highlight a promising new combined treatment for TRD.
- 2 Future research should examine combined external neuromodulation/ketamine treatments using randomized controlled trial designs to assess its efficacy alongside control, placebo, and pharmacological interventions.