

## **Efficacy of high-frequency repetitive transcranial magnetic stimulation on panss factors in schizophrenia with predominant negative symptoms: results from an exploratory re-analysis**

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questions for the first time. The aim of the present study was to test the inter-rater reliability of PANSS-6 ratings obtained using the SNAPSI.

**Methods:** The team of raters (five medical doctors and two psychologists) attended training sessions prior to the inter-rater reliability test. At the training sessions one rater interviewed a patient with schizophrenia using the SNAPSI, while all raters conducted PANSS-6 ratings independently. After each interview the PANSS-6 ratings were discussed until an agreement was reached. Each rater participated in at least six SNAPSI/PANSS-6 training ratings.

For the inter-rater reliability test, a total of 12 patients with a primary diagnosis of schizophrenia, currently undergoing in- or outpatient treatment at the Department for Psychosis, Aarhus University Hospital – Denmark, will be recruited. The team of raters will perform a total of at least 50 PANSS-6 ratings via SNAPSI. All raters will conduct the SNAPSI at least once. As a measure of inter-rater reliability, we will calculate the Intraclass Correlation Coefficient based on the 50 PANSS-6 ratings.

**Results:** The results of the inter-rater reliability test will be available in January 2018 and presented at the SIRS 2018 conference.

**Discussion:** If the results of the inter-rater reliability test are satisfactory, we will conduct a clinical validation of PANSS-6. In this study we will test whether PANSS-6 ratings obtained using the SNAPSI correspond to PANSS-6 ratings extracted from independent PANSS-30 ratings obtained using the SCI-PANSS. If this is the case, PANSS-6 ratings obtained using the SNAPSI will facilitate valid measurement-based care of schizophrenia in clinical practice.

#### S49. EFFICACY OF HIGH-FREQUENCY REPETITIVE TRANSCRANIAL MAGNETIC STIMULATION ON PANSS FACTORS IN SCHIZOPHRENIA WITH PREDOMINANT NEGATIVE SYMPTOMS – RESULTS FROM AN EXPLORATORY RE-ANALYSIS

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**Background:** Repetitive transcranial magnetic stimulation (rTMS) applied to the left frontal lobe is discussed to be a promising add-on treatment for negative symptoms in schizophrenia. The Positive and Negative Syndrome Scale (PANSS) has been used as outcome parameter in several previous rTMS trials, but studies focusing on PANSS factor analyses are lacking.

For this purpose, we used the available PANSS data of the 'rTMS for the Treatment of Negative Symptoms in Schizophrenia' (RESIS) trial to calculate different literature-based PANSS factors and to re-evaluate the impact of rTMS on negative symptoms in this trial.

**Methods:** In an exploratory re-analysis of published data from the RESIS study (Wobrock et al. 2015), we tested the impact of rTMS applied to the left dorsolateral prefrontal cortex on two PANSS factors for negative symptoms in psychotic disorders as well as on a PANSS five-factor consensus model intending to show that active rTMS treatment improves PANSS negative symptom subscores.

**Results:** In accordance to the original analysis, all PANSS factors showed an improvement over time in the active and, to a considerable extent, also

in the sham rTMS group. However, comparing the data before and directly after the rTMS intervention, the PANSS excitement factor improved in the active rTMS group significantly more than in the sham group, but this finding did not persist if follow-up data were taken into account. These additional analyses extend the previously reported RESIS trial results showing unspecific improvements in the PANSS positive subscale in the active rTMS group.

Our PANSS factor-based approach to investigate the impact of prefrontal rTMS on different negative symptom domains confirmed no overall beneficial effect of the active compared to sham rTMS.

**Discussion:** This secondary analysis of the RESIS trials has several limitations. First of all, the analysis of the primary endpoint was negative [24] and all subsequent secondary analyses showing a positive effect of the intervention (here: change in PANSS excitement factor) are of limited statistical power and therefore subject to uncertainty. On the other hand, our analyses confirm the negative finding of the original publication extends this finding to a broader negative symptom definition. Moreover, the new analysis provides a possible, but hypothetical explanation for the previously described effect of active rTMS on PANSS positive subscale. Of course, many other PANSS factor models are available and in pharmacological research the Marder factors [23, 35] have particular significance. However, the here used five-factor consensus model [21] includes the Marder factor results and our negative symptom factors overlaps with those factors. Another limitation is that it may be possible that our sham stimulation (coil tilted over one wing at an angle of 45°[24]) may still have been slightly biologically active as discussed elsewhere [24].

#### S50. EMPLOYING TEXT-MESSAGES TO IMPROVE MOTIVATION: MOBILE ENHANCEMENT OF MOTIVATION IN SCHIZOPHRENIA

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**Background:** Motivation deficits are among the strongest determinants of reduced functioning and quality of life in people with schizophrenia. Mobile interventions are a promising approach to improving these deficits because they can provide frequent cues and reinforcements to support goal-directed behavior in daily life. The objective of this study is to assess the initial feasibility/acceptability and effectiveness of Mobile Enhancement of Motivation in Schizophrenia (MEMS), a personalized mobile text message intervention, compared to a goal-setting alone intervention.

**Methods:** Fifty-six participants with a schizophrenia-spectrum disorder have been enrolled in this ongoing controlled pilot study. Twenty-seven participants have been randomized to MEMS, while 29 participants have been randomized to the goal-setting alone condition. Participants in both groups set individualized recovery goals to complete over an 8-week period. Those in the MEMS group also receive three sets of personalized, interactive text messages each weekday to reinforce and cue goal completion. Blinded assessments are conducted before and after the 8-week period and include validated measures of motivation, quality of life, and functioning. Goal attainment and self-reported satisfaction with MEMS are also assessed.

**Results:** To date, 36 participants (n = 18 in each group) have completed both baseline and follow-up assessments. Initial results suggest that relative to the goal-setting alone group, the MEMS group demonstrated significantly greater improvements in clinician-rated motivation (F(1, 33) = 7.14, p = .01; between-group d = .89). Specifically, the MEMS group demonstrated significantly higher clinician-rated motivation after 8 weeks (within-group d = .62), while clinician-rated motivation remained the same in the goal-setting alone group (within-group d = -.02). Across both groups, participants also significantly improved on clinician-rated functioning over time (t(35) = -2.56, p = .02, d = .43), but there was no difference between the two groups (F(1, 33) = .01, p = .94; between-group d = .03). No improvement on self-reported quality of life was observed in either group or across