

**Introduction:** Depressive symptoms are common in patients with Fibromyalgia (FM), a chronic and disabling pain syndrome. Psychological interventions are mostly focused in negative thinking and behavioural activation. However, several studies suggest that personal identity is also affected by FM.

**Objectives:** We aimed to examine the effects of Personal Construct Therapy (PCT), an idiographic approach that emphasizes identity features and interpersonal construal, on depressive symptoms in women with FM.

**Methods:** In the context of a multicentre parallel randomized trial (Trial Registry: NCT02711020), 106 women with FM and presenting depressive symptoms were randomized either to either Cognitive Behavioural Therapy (CBT;  $n = 55$ ), taken as a gold standard comparison, or PCT ( $n = 51$ ). In total, 69 patients completed the treatment and the six-month follow-up assessment (CBT = 32 and PCT = 37). Both treatments were applied on case formulation premises.

**Results:** Linear mixed-effects models were performed to compare depressive symptoms between treatment conditions. Anxiety and pain measures were treated as secondary outcomes. Participants in both conditions significantly reduced their levels of depression and anxiety as well as the impact of FM but no significant between treatment differences were found. Analysis of clinically significant change for depressive symptoms and pain was also similar between both conditions.

**Conclusions:** PCT resulted equally effective in the treatment of depressive symptoms in women with FM when compared with CBT, both offered in a modular format. Thus, PCT with its focus on identity issues can be considered as an alternative treatment for these patients.

**Disclosure:** No significant relationships.

**Keywords:** Fibromyalgia Impact; Treatment Efficacy; Psychotherapy; RCT

## EPP0392

### The frequency-dependent stimulation effects of rTMS on the performance of problem-solving tasks and ongoing oscillations

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**Introduction:** Recent studies suggest that online repetitive transcranial magnetic stimulation (rTMS) can induce local entrainment of ongoing endogenous oscillatory activity that impacts cognitive performance, and the effect may depend on the function of the oscillation. However, little is known about the effects of task-specific frequencies, especially when using an online rTMS paradigm. Our previous electroencephalogram (EEG) study showed that the frontal theta rhythm is associated with the cognitive giving-up processes during problem-solving tasks.

**Objectives:** In this study, we combined online rTMS and EEG to examine the frequency-dependent stimulation effects of rTMS on the performance of problem-solving tasks and ongoing oscillations. We hypothesized that rTMS at the theta frequency would induce ongoing theta activity and accelerate the giving-up behaviour.

**Methods:** rTMS was applied during problem-solving tasks with the following conditions: individual theta (4-6Hz)- and alpha (9-13Hz)-TMS, no-TMS, and sham-TMS; the order of conditions was counterbalanced across participants.

**Results:** Our results showed that theta-frequency rTMS application induced an increase in theta amplitudes and shortened the giving-up response, while a control alpha-frequency rTMS application induced an increase in alpha amplitudes, but did not change giving-up responses.

**Conclusions:** This study demonstrated the effectiveness of using specific task-relevant stimulation frequency and target location for the modulation of cognitive and behavioral performance. Furthermore, considering the close resemblance between giving-up behaviour and rumination in depression, neuromodulation of cognitive giving-up processes may lead to a new intervention to treat depression by rTMS.

**Disclosure:** No significant relationships.

**Keywords:** EEG; TMS; rumination; theta

## EPP0393

### Less basal thyrotropin levels predict antidepressant response in patients with major depression

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**Introduction:** The close association among thyroid metabolism, mood disorders and behavior has long been known. The role of basal thyroid axis in antidepressant treatment response is less known.

**Objectives:** The aim of the present study was to study the association of basal serum thyrotropin (TSH) levels, with antidepressant treatment response in major depressive disorder.

**Methods:** Thirty-one depressed adult outpatients were included. Major depressive episode was diagnosed through the MINI (DSM-IV-TR) interview. Clinical symptomatology and blood samples were assessed at baseline, and at 4- and 8-weeks of either escitalopram or sertraline. Treatment response was defined by an improvement  $\geq 50\%$  in MADRS scores at 4-, and 8-weeks. Basal TSH levels were included in a linear regression model as predictor of treatment response.

**Results:** Twenty-seven patients finished 8-weeks of treatment. Response to treatment was of 74% at 4-weeks, and 63% at 8-weeks of antidepressant treatment. Basal median TSH levels were between normal ranges ( $M+SD=1.85+1.02$  mIU/L). Basal TSH levels not correlated with basal MADRS scores, but with higher MADRS scores at week-4 ( $r=0.415$ ,  $p=0.031$ ) and at week-8 ( $r=0.392$ ,  $p=0.043$ ). Moreover, less baseline TSH levels trend to be a significant good predictor for treatment response at 4-weeks ( $R^2=.116$ ,  $p=.083$ ); and a good predictor at 8-weeks treatment ( $R^2=.147$ ,  $p=.049$ ).

**Conclusions:** Baseline TSH levels even within the normal range may play a role in predicting antidepressant response.