

## **Electrophysiological and genetic factors associated with hypnosis, suggestibility and hypnotic phenomenology**

### **ABSTRACT:**

#### **Aim**

The aim was to investigate the neurobiology of suggestibility and brain changes linked to hypnotic response.

#### **Method**

Online questionnaires to assess personality traits were completed by 456 people, 328 were screened for suggestibility, 76 completed the behavioural tasks, 65 the resting state EEG, 64 the task-based EEG, 53 the genetic assessment, 62 the MRI scanning.

#### **Results**

Transliminality was weakly correlated with the imaginative suggestibility subjective measure, and the hypnotic suggestibility objective, subjective and involuntariness measures (Irving et al., 2014). The systematic review on the associations between genetic variants and hypnotic suggestibility found COMT to be the most studied, but the findings were inconsistent across studies. Our genetic analysis, limited by participant numbers (e.g., due to COVID restrictions), revealed no significant difference in suggestibility level according to COMT genotype (n=48), however, there was an association with self-reported dissociation. DTNBP1 genotype was linked to suggestibility level. One rsEEG microstate occurred more in those higher in suggestibility, whereas another was related to both hypnotic depth and relaxation.

#### **Conclusions**

This project has delivered an extremely well-characterised dataset for the study of suggestibility and hypnosis, and will enable investigation of the multimodal predictors of hypnotic suggestibility.

#### **Keywords**

Hypnosis, Suggestibility, EEG, Genetics, Multimodal dataset

### **Published Work:**

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