Effects of being imitated on beta and mu oscillations
evoked by pain observation

Recently it has been observed that being imitated enhances affective responses evoked by other’s pain. Further, in a transcranial magnetic stimulation (TMS) study, De Coster and colleagues (2014) demonstrated that being imitated by another person also modulates motor evoked potentials (MEPs) when seeing this other person in pain. This finding of modulation of motor system excitability indicates that sensorimotor processes during pain observation might be modulated by imitation. However, MEPs reflect excitability of selective muscle motor representations at a specific point in time and provide little insight into activity of extended sensorimotor cortical networks and their dynamic modulation over time. Therefore, it is the aim of the planned study to employ EEG to specifically investigate whether resonant responses of sensorimotor cortex to pain of others are influenced by being imitated by the other person.

Planned experimental parameters

- 40 to 60 participants
- EEG study incorporating an experimental paradigms and questionnaires

The master thesis includes participant recruitment, data acquisition, and data analysis. Autonomous and responsible handling of the experimental set-up will be essential. The experimental set-up will require a lot of team-work and accuracy in its development. Frustration-tolerance, as well as high team-working skills and distinctly high motivation regarding the content of the study are absolutely necessary.

Supervisor

Univ.-Prof. Dr. Mag. Claus Lamm, Dr. Igor Riecansky, (Mag. Anna Wucherer)

Please send applications (CV, letter of motivation, short project proposal of 1 page) to:
anna.wucherer@univie.ac.at

Please note: There are also internship positions available in this project.
Literature


