

## Master thesis opportunity

### Motor Imagery: How to successfully implement this mental simulation technique in clinical settings

#### Background:

Motor imagery is a powerful technique that originated in sports psychology and is successfully used in rehabilitation, in particular in neurorehabilitation (Barclay et al., 2020). The mechanism of the technique is based on brain area activation similar to movement execution. In 2011, a comprehensive systematic literature review analysed MI interventions in five different fields: psychology, sports, medicine, education, and music. Furthermore, based on the PETTLEP framework (Holmes & Collings, 2001) the MI interventions were analysed regarding its implementation: **P**hysical, **E**nvironment, **T**ask, **T**iming, **L**earning, **E**motion, and **P**erspective. Only poor reporting of details was detected making it impossible to draw final recommendations how a successful MI intervention should be designed.

**Aim:** The aim of the present investigation is to analyse randomised controlled trials (RCTs) published between 2010 to present in the field of medicine, in particular neurorehabilitation, to evaluate how the reporting regarding PETTLP has changed and how a successful MI intervention should be implemented.

**Tasks:** The successful candidate will perform a systematic literature review focussing on RCTs published since 2010 until today in the field of (neuro-)rehabilitation including studies that reported or compared a MI training intervention with other therapy options. References will be searched, exported into, and selected in a reference management software (EndNote, Zotero). Based on the PETTLEP framework data will be extracted and compared. The RevMan software will be used to evaluate the effect of the selected studies.

#### Requirements:

- Interests to get to know a training technique that originated in sports psychology and is used in the field of rehabilitation: motor imagery
- Understanding how to perform a high quality systematic literature review including to perform a comprehensive literature search, manage references, and extract study data
- Proficiency in use of MS Office
- Basic knowledge of statistical analysis with appropriate software, e.g. RevMan, would be an asset
- Highly motivated and team-oriented working morale

#### Offer:

- Introduction and supervision throughout the entire project
- Exciting opportunities in an interdisciplinary environment of clinical research and rehabilitation
- Possibility to visit various departments involved in rehabilitation of neurologic and orthopaedic patients.

#### Time period:

Begin is negotiable. Duration: 6 to 9 months.

For further questions, please contact Dr. C. Schuster-Amft, Research Department, Reha Rheinfelden ([c.schuster@reha-rhf.ch](mailto:c.schuster@reha-rhf.ch)). To view other opportunities at our department, go to: <https://www.reha-rheinfelden.ch/ueber-uns/wissenschaft/> (bottom)