

Master thesis opportunity

Motor Imagery and action observation: Are the simulation techniques already part of the clinical rehabilitation routine?

Background:

Motor imagery and action observation are powerful mental simulation techniques. Motor imagery originated in sports psychology and both techniques are used in rehabilitation, in particular in neurorehabilitation. The mechanisms of both techniques are based on brain area activation similar to movement execution.

In 2020, more than 350 articles regarding motor imagery and more than 140 articles regarding action observation were published including several systematic literature summaries (Cochrane: Barclay et al., 2020). So far, motor imagery is implemented in clinical treatment guidelines. Despite its promising effects, both techniques are not instructed in therapy courses and only less in further education courses. Rudimentarily motor imagery training is implemented in treatment guidelines for sensorimotor impairments. However, are both promising techniques used in clinical routine?

Aim: The aim of the present project is to evaluate the knowledge and implementation level of motor imagery and action observation in clinical practice including acute hospitals, rehabilitation clinics, and private practices. What do therapists or trainers know about motor imagery and action observation, how are the techniques successfully implemented, and are the health professionals interested in motor imagery and action observation training events.

Tasks: The successful candidate will perform a comprehensive online survey including acute hospitals, rehabilitation clinics, and private practices. The knowledge, implementation, questions regarding motor imagery and action observation and the interest in training options will be assessed.

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 PD Dr. phil. C. Schuster-Amft, Research Department, Reha Rheinfelden (c.schuster@reha-rhf.ch). To view other opportunities at our department, go to: <https://www.reha-rheinfelden.ch/ueber/themen-fuer-masterthesen>