Research

Using an interactive virtual environment to integrate a digital Action Research Arm Test, motor imagery and action observation to assess and improve upper limb motor function in patients with neuromuscular impairments: a usability and feasibility study

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Short summary:	In the recent past, training systems using an interactive virtual environment have been introduced to neurorehabilitation. Such systems can be applied to encourage purposeful limb movements and will increasingly be used at home by the individual patient. Therefore, an integrated valid and reliable assessment tool on the basis of such a system to monitor the recovery process would be an essential asset. The aim of the study is to evaluate usability, feasibility and validity of the digital version of the Action Research Arm Test using the Bi-Manu-Trainer system as a platform. Additionally, the feasibility and usability of the implementation of Action Observation and Motor Imagery tasks into the Bi-Manu Trainer software will be evaluated.