Introduction

Virtual reality (VR) systems have been shown to be effective for the treatment of patients with motor impairments; however, the exact characteristics that lead to improvements are not well understood and more research is still needed to optimize therapeutic outcomes and VR systems [1]. Today it is not known exactly how features of a virtual environment impact upon treatment outcomes.

There are numerous separate components that together constitute a virtual environment, such as avatars, game objects, the virtual world, or sound effects. What impact these components have on patient behavior is not entirely clear as today we do not have a comprehensive understanding of what makes a VR environment helpful or not. Thus, we propose to separate the main visual feedback provided by VR systems and identify three distinct feedback types that are important for motor rehabilitation.

Background objects and animations give the VR system the impression of a real environment that is not just a technical artefact for therapeutic purposes. Atmospheric sensory stimuli in the form of sounds can add to the vividness of the experience.

Support us 
building a systematic overview of best-practice that may aid the development and design of future VR rehabilitation systems. Send us your considerations on www.vr-rehabilitation-checklist.org

References


Support us building a systematic overview of best-practice that may aid the development and design of future VR rehabilitation systems. Send us your considerations on www.vr-rehabilitation-checklist.org

Contact
Thomas Schüler 
schueler@salt-and-pepper.eu 
Luara Ferreira dos Santos 
santos@iwf.tu-berlin.de 
Simon Hoermann 
hoermann@otago.ac.nz

West Germany