Effects of neurofeedback training on behaviour and quality of life in children with ADHD

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Abstract

Following promising results of neurofeedback training (NFT) in children with attention-deficit/hyperactivity disorder (ADHD), we aim at investigating effects of a near-infrared spectroscopy (NIRS)-based NFT on ADHD behaviour in schoolchildren with ADHD. Further, we aim at examining its effects on quality of life (QoL) and possible relationships with behavioural changes.
Sixty children with a DSM-V diagnosis of ADHD will be randomly assigned to either NIRS-based NFT in virtual reality or NIRS-based NFT in 2D. Children will receive 15 training sessions and will participate in a pre- and a post-test and 6-month follow-up. ADHD symptoms will be assessed via parent and teacher ratings on the Conners 3. Health-related QoL will be examined using the KINDL questionnaires for children and parents, behaviour-related QoL by the Strengths and Difficulties Questionnaire (SDQ).
We hypothesise that ADHD behaviour decreases and QoL increase in both groups. Further, we predict a higher increase in QoL when parents report higher symptom reduction.
The first participants started training in November 2015. Data from the first ten participants will be presented.
Investigating the efficacy of NFT, most studies mainly looked at clinical outcome measures such as ADHD behaviour. However, parents do not primarily seek treatment because of ADHD symptoms, but due to the symptoms' secondary impact on parents' and child's physical and psychological well-being, hence QoL. Consequently, further research needs to clarify the relationship of symptom and QoL improvement after NFT in ADHD children. Further examinations will later need to clarify the moderating roles of expectancies and parental commitment to treatment.