

BRIDGING THE GAP

Complementing outpatient care by implementing computer-based cognitive training at home – a feasibility randomized controlled trial

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Abstract

Aim: To facilitate the transition from inpatient to outpatient treatment regarding individualized cognitive training for patients with acquired brain injuries. A suitable procedure providing computer-based training at home was introduced and evaluated with respect to quality of life and cognitive performance.

Methods: Fifty-two individuals with cognitive deficits following brain injury were selected either at the time of discharge from a rehabilitation center or while awaiting outpatient neuropsychological therapy. They were randomized to an intervention group that received four weeks of cognitive training with RehaCom®Online at home or a waitlist control group. Cognitive training was tailored to the individual needs by adapting the training tasks and schedule based on the recommendations of the treating neuropsychologist. A comprehensive neuropsychological test battery was administered before and after the intervention to examine 1) Feasibility of the procedure: Adherence to training recommendation and experience of the patients, and 2) training effects with respect to a) quality of life operationalized by standardized questionnaires on life satisfaction, well-being, self-efficacy, activity and participation, and b) cognitive performance, measured by standardized neuropsychological tests.

Results: The procedure was feasible in discharge practice and showed good acceptance. Treatment adherence was high, and patients felt confident even without professional supervision. Compared with the waitlist control group, the intervention group improved significantly in terms of both quality of life (life satisfaction, well-being) and cognitive performance (basal responsiveness). No effects were found for other cognitive domains or for self-efficacy, activity and participation.

Conclusions: The approach of individualized cognitive training at home could contribute to more sustainable outpatient care. Prescribing an individualized training plan prior to discharge seems to be a useful way to provide easy access to cognitive therapy. The effects achieved are comparable to previous studies offering professionally supervised cognitive training. Therefore, its widespread use in the discharge management of rehabilitation centers or as a tool to manage patients on waiting lists has the potential to preserve therapy effects and reduce the risk of cognitive decline after discharge.