

February 2024

NeuroBITE

NEWSLETTER

Welcome to the third monthly NeuroBITE newsletter!

We are excited about bringing this new feature to our supporters, as well as anybody interested in research on cognitive, behavioural and other treatments for psychological problems and issues occurring as a consequence of acquired brain impairment (ABI)! Here you can find a list of interesting intervention studies that have recently been added to NeuroBITE database.

Happy reading!

TBI

Wade, S. L., Sidol, C., Babcock, L., Schmidt, M., Kurowski, B., Cassedy, A., & Zhang, N. (2023). Findings from a randomized controlled trial of SMART: An Ehealth intervention for mild traumatic brain injury. *Journal of Pediatric Psychology*, 48(3), 241-253.

PEDro-P score: 6/10

TBI + Stroke

Rauwenhoff, J. C., Bol, Y., Peeters, F., van den Hout, A. J., Geusgens, C. A., & van Heugten, C. M. (2023). Acceptance and commitment therapy for individuals with depressive and anxiety symptoms following acquired brain injury: A non-concurrent multiple baseline design across four cases. *Neuropsychological Rehabilitation*, 33(6), 1018-1048. **OPEN ACCESS**

RoBiNT score: 16/30

Stroke

Abdullahi, A., Wong, T. W. L., Van Crieking, T., & Ng, S. S. M. (2023). Combination of noninvasive brain stimulation and constraint-induced movement therapy in patients with stroke: A systematic review and meta-analysis. *Expert Review of Neurotherapeutics*, 23(2), 187-203.



Ahrens, J., Shao, R., Blackport, D., Macaluso, S., Viana, R., Teasell, R., & Mehta, S. (2023). Cognitive-behavioral therapy for managing depressive and anxiety symptoms after stroke: a systematic review and meta-analysis. *Topics in Stroke Rehabilitation* 30(4), 368-383.

Amiri, S., Hassani-Abharian, P., Vaseghi, S., Kazemi, R., & Nasehi, M. (2023). Effect of RehaCom cognitive rehabilitation software on working memory and processing speed in chronic ischemic stroke patients. *Assistive Technology*, 35(1), 41-47.

PEDro-P score: 5/10

Gao, Y., Qiu, Y., Yang, Q., Tang, S., Gong, J., Fan, H., Wu, Y., & Lu, X. Repetitive transcranial magnetic stimulation combined with cognitive training for cognitive function and activities of daily living in patients with post-stroke cognitive impairment: A systematic review and meta-analysis. *Ageing Research Reviews* 87, 101919.

Qin, Y., Liu, X., Zhang, Y., Wu, J., & Wang, X. (2023). Effects of transcranial combined with peripheral repetitive magnetic stimulation on limb spasticity and resting-state brain activity in stroke patients. *Frontiers in Human Neuroscience*, 17, 992424. **OPEN ACCESS**

PEDro-P score: 5/10

Dementia / MCI

Diaz Baquero, A. A., Franco-Martin, M. A., Vidales, E. P., Toribio-Guzman, J. M., Bueno-Aguado, Y., Abad, F. M., Perea Bartolome, M. V., Asl, A. M., & van der Roest, H. G. (2022). The effectiveness of GRADIOR: A neuropsychological rehabilitation program for people with mild cognitive impairment and mild dementia. Results of a randomized controlled trial after 4 and 12 months of treatment. *Journal of Alzheimer's Disease*, 86(2), 711-727. **OPEN ACCESS**

PEDro-P score: 6/10

Kashimura, M., Ishiwata, A., Tateno, A., & Spector, A. (2022). Feasibility and acceptability of cognitive behavioural therapy in older Japanese people with cognitive decline: A single-arm intervention. *The Cognitive Behaviour Therapist*, 15, e52.

Yang, Z., Sheng, X., Qin, R., Chen, H., Shao, P., Xu, H., Yao, W., Zhao, H., Xu, Y., & Bai, F. (2022). Cognitive improvement via left angular gyrus-navigated repetitive transcranial magnetic stimulation inducing the neuroplasticity of thalamic system in amnesic mild cognitive impairment patients. *Journal of Alzheimer's Disease*, 86(2), 537-551.



Ratings

NeuroBITE also evaluates the methodological rigor (methodological quality) of primary studies that use a control condition to demonstrate the efficacy of a treatment. The primary studies involved are randomised controlled trials (RCTs), non-RCTs, and single-case experimental designs (SCEDs). Two method quality rating scales are used: the PEDro-P Scale to rate RCTs and nRCTs, and the Risk of Bias in N-of-1 Trials (RoBiNT) Scale to rate SCEDs. For more information, and to learn how to critically appraise studies using these scales, please visit our [Rating Information](#) and [Training](#) pages.

PEDro-P Scale

The PEDro-P Scale consists of 11 items (10 of which contribute to the total score). Often, complex (behavioural) intervention studies can only score a maximum of 8/10 because it is difficult to meet criteria on the two PEDro items for blinding participants and blinding therapists given the nature of behavioural interventions. For score interpretation, by convention, a score of 6 or more on the PEDro Scale is considered to reflect 'moderate' or 'good' methodological quality.

RoBiNT Scale

The RoBiNT Scale consists of two subscales: the Internal Validity (IV) Subscale (7 items) and the External Validity and Interpretation (EVI) Subscale (8 items). Items are rated on a 3-point scale (0-2), resulting in a maximum score of 14 for the IV Subscale, 16 for the EVI Subscale, and 30 for the total score. Score interpretation for the IV subscale, which reflects the methodological rigor (methodological quality) of a study, uses a validated algorithm, which is described in a supplement (Perdices, Tate & Rosenkoetter, 2019) to the RoBiNT Manual. The algorithm classifies the weighted scores of the seven IV Subscale items into six categories of methodological rigor, ranging from 'very high' to 'very low'.

