

June 2025

NeuroBITE

NEWSLETTER

Welcome to the June 2025 edition of the NeuroBITE newsletter!

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Good day from NeuroBITE!

We have some really exciting new studies from the world of Neurorehabilitation in our newsletter this month. Firstly, we have a series of interesting papers on Stroke including a feasibility study of museum-based art therapy, a virtual reality intervention and a systematic review of mirror therapy on upper limb motor function. Then, we have a groundbreaking SCED study of EMDR for PTSD in ABI. We also have some innovative technology-based interventions for mild cognitive impairment; and interventions for mild TBI including neuromodulation and an exercise-based intervention for persistent, post-concussive symptoms. Very relevant at the moment!

We round out the newsletter with two studies on Parkinson's; both interventions are self-managed or directed by people with Parkinson's themselves. Five of the studies are Open Access and all relevant studies are rated for quality either on the PERro-P or RoBiNT.

Enjoy!

Stroke

Museum-based art therapy program in the chronic phase of stroke: A feasibility pilot study

Alharbi, H., Higgins, J., Leonard, G., Boissy, P., Vincent, C., Leclerc, J., Milot, M.-H., & Boudrias, M.-H. (2025). Art Therapy, 1-9.

OPEN ACCESS



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Effects of a stimulus response task using virtual reality on unilateral spatial neglect: A randomized controlled trial

Motomura, K., Amimoto, K., Numao, T., & Kaneko, F. (2024). Archives of Physical Medicine and Rehabilitation, 105(8), 1449-1457.

PEDro-P Score: 8/10

Effects of mirror therapy on upper limb motor function of patients with stroke: A systematic review and meta-analysis of randomized controlled trials

Saragih, I. D., Priyanti, R. P., Batubara, S. O., & Lee, B. O. (2025). Clinical Rehabilitation, 39(1), 23-34.

Traumatic Brain Injury / Stroke

Eye movement desensitization and reprocessing for posttraumatic stress disorder following acquired brain injury: A multiple baseline single case experimental design study across four cases.

Janssen, E. P. J., Spauwen, P. J. J., Rijnen, S. J. M., & Ponds, R. W. H. M. (2025). Neuropsychological Rehabilitation, 1-29.

OPEN ACCESS

RoBiNT Score: 21/30

Mild Cognitive Impairment

South Korean study to prevent cognitive impairment and protect brain health through multidomain interventions via face-to-face and video communication platforms in mild cognitive impairment (SUPERBRAIN-MEET): A randomized controlled trial.

Moon, S. Y., Park, Y. K., Jeong, J. H., Hong, C. H., Jung, J., Na, H. R., Cho, S. H., Kim, H. S., Song, H.-S., Choi, M., Ku, B. D., Moon, Y. S., Han, H. J., Hong, Y. J., Kim, E.-J., Kim, G. H., Kim, K. W., Jang, H., Yoon, S. J., Kim, H.-J., & Choi, S. H. (2025). Alzheimer's and Dementia, 14517, 1-13.

OPEN ACCESS

PEDro-P Score: 8/10



Effects of immersive and non-immersive virtual reality-based rehabilitation training on cognition, motor function, and daily functioning in patients with mild cognitive impairment or dementia: A systematic review and meta-analysis.

Ren, Y., Wang, Q., Liu, H., Wang, G., & Lu, A. (2024). Clinical Rehabilitation, 38(3), 305-321.

Mild Traumatic Brain Injury

Improvement in persistent post-concussive symptoms after treatment with neuromodulation: A case study.

Baham, M., Harris, M. H., Kong, D., Chogle, A., & Pearson, R. (2024). Journal of Pediatric Neuropsychology, 10(4), 314-323.

OPEN ACCESS

Effect of aerobic exercise on symptom burden and quality of life in adults with persisting post-concussive symptoms: The ACTBI randomized controlled trial.

Mercier, L. J., McIntosh, S. J., Boucher, C., Joyce, J. M., Batycky, J., Galarneau, J. M., Esser, M. J., Schneider, K. J., Dukelow, S. P., Harris, A. D., & Debert, C. T. (2025). Archives of Physical Medicine and Rehabilitation, 106, 195-205.

PEDro-P Score: 7/10

Parkinson's Disease

A programme evaluation of 'First Steps': A peer-conceived, developed and led self-management intervention for people after a Parkinson's diagnosis.

*Collett, J., Lawrie, S., Bromley, S., Harling, P., Reed, A., Brusco, N., Coe, S., Coebergh, J., Carroll, C., Roberts, H. C., Hu, M. T., & Dawes, H. (2024). Clinical Rehabilitation, 38(3), 403-413. **OPEN ACCESS***

PEDro-P Score: 5/10

Self-directed physical activity interventions for motor symptoms and quality of life in early and mid-stage Parkinson's disease: A systematic review and meta-analysis.

Li, H., Cao, C., & Li, Y. (2024). Archives of Gerontology and Geriatrics, 116, 1-14.



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'.

