# NeuroBITE
# NEWSLETTER

*Welcome to the December 2024 edition of the NeuroBITE newsletter!*

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*As the year draws to a close, we've curated another compelling selection of articles for you to enjoy —whether you're sipping a cozy cup of cocoa or soaking up the summer sun here in Australia.*

*This month's highlights include four randomized controlled trials, two of which earned an impressive PEDro-P score of 8/10. One standout study explored the impact of combining mindfulness-based cognitive therapy with diet modification to address dysphagia in patients with multiple sclerosis. This dual intervention showed remarkable results, including reduced dysphagia and psychological symptoms, alongside improved emotion regulation and mindfulness levels.*

*Happy reading, and here's to a knowledge-filled end to the year!*

## Mild Cognitive Impairment

Mraz, H., Tong, C.-Y., & Liu, K. P. (2023). Semantic-based memory-encoding strategy and cognitive stimulation in enhancing cognitive function and daily task performance for older adults with mild cognitive impairment: A pilot non-randomised cluster controlled trial. *PLoS ONE*, *18*(3). **OPEN ACCESS**

Siverova, J., & Buzgova, R. (2018). The effect of reminiscence therapy on quality of life, attitudes to ageing, and depressive symptoms in institutionalized elderly adults with cognitive impairment: A quasi-experimental study. *International Journal of Mental Health Nursing*, *27*(5), 1430-1439.

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**Multiple Sclerosis**

Sadeghi, Z., Ghoreishi, Z. S., Flowers, H. L., Mohammadkhani, P., & Noroozi, M. (2023). Efficacy of mindfulness-based cognitive therapy compared to diet modification alone for dysphagia in persons with multiple sclerosis. *Mindfulness*, *14*(1), 91-100.
**PEDro-P Score: 8/10**

**Multiple Sclerosis / Stroke / Traumatic Brain Injury**

Mazo, G., Pantaleo, S., van der Oord, A., Picq, J.-L., Hertz-Pannier, L., Brunet, E., Azouvi, P., & Vallat-Azouvi, C. (2024). Rehabilitation of working memory after acquired brain injury and multiple sclerosis: A systematic review. *Neuropsychological Rehabilitation*, 1-39.

**Stroke**

Ho, H.-Y., Chen, M.-D., Tsai, C.-C., & Chen, H.-M. (2022). Effects of computerized cognitive training on cognitive function, activity, and participation in individuals with stroke: A randomized controlled trial. *NeuroRehabilitation*, *51*(1), 79-89.
**PEDro-P Score: 6/10**

Liu, S., Huang, X., Liu, Y., Yue, J., Li, Y., & Chen, L. (2024). A scoping review of the use of creative activities in stroke rehabilitation. *Clinical Rehabilitation 38*(4), 497-509.

Moon, K., Jang, W., Park, H. Y., Jung, M., & Kim, J. (2022). The effects of occupation-based community rehabilitation for improving activities of daily living and health-related quality of life of people with disabilities after stroke living at home: A single subject design. *Occupational Therapy International* 2022, 1-10. **OPEN ACCESS**
**RoBiNT score: 9/30**

**Stroke / Traumatic Brain Injury**

Ishida, J., Murai, T., Ueda, K., Furukawa, T. A., & Tanemura, R. (2023). Utility of a novel tablet computer software for memory impairment in participants with brain injuries: A randomized control trial. *Neuropsychological Rehabilitation*, *33*(1), 85-102.
**PEDro-P Score: 8/10**

**Traumatic Brain Injury**

Ludwig, R. O. T., Rippee, M. M. D., D'Silva, L. P. P. T., Radel, J. P., Eakman, A. M., Beltramo, A. M. S., Drerup, M. P. D., & Siengsukon, C. P. P. T. D. (2024). Cognitive Behavioral Therapy for Insomnia Improves Sleep Outcomes in Individuals With Concussion: A Preliminary Randomized Wait-List Control Study. *Journal of Head Trauma Rehabilitation.*
**PEDro-P Score: 5/10**

**Brain Tumour / Stroke / Traumatic Brain Injury**

van de Wouw, C. L., Visser, M., Gorter, J., Huygelier, H., & Nijboer, T. (2024). Systematic review of the effectiveness of innovative, gamified interventions for cognitive training in paediatric acquired brain injury. *Neuropsychological Rehabilitation*, *34*(2), 268-299.

## 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'.