October 2024

NeuroBITE NEWSLETTER

Welcome to the October 2024 edition of the NeuroBITE newsletter!

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We are happy to share this month's highlights with our community, featuring the latest research on cognitive, behavioural, and other treatments for psychological challenges arising from acquired brain impairment (ABI). Below, you'll find a carefully curated list of new intervention studies recently added to the NeuroBITE database.

This month's newsletter highlights a diverse range of clinical populations recently added to the database. As of the end of September, there are 2,589 studies on dementia, 3,268 on stroke, 1,781 on traumatic brain injury, and 689 on multiple sclerosis. We have also included three randomized controlled trials (RCTs), all rated 7/10 or higher. Simply click on the references to access their NeuroBITE records, where you can view a detailed breakdown of their scores.

Happy reading!

Dementia

Griffin, A., O`Gorman, A., Robinson, D., Gibb, M., & Stapleton, T. (2022). The impact of an occupational therapy group cognitive rehabilitation program for people with dementia. *Australian Occupational Therapy Journal*, 69(3), 331-340. (Case series) **OPEN ACCESS**

Manji, I., Wells, S., Dal Bello-Haas, V., & Fallavollita, P. (2024). Impact of dance interventions on the symptoms of dementia: A mixed-methods systematic review. *Arts & Health: An International Journal for Research, Policy and Practice*, 16(1), 64-88.

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Dementia - Alzheimer's Disease

Avila, A., De-Rosende-Celeiro, I., Torres, G., Vizcaino, M., Peralbo, M., & Duran, M. (2018). Promoting functional independence in people with Alzheimer's disease: Outcomes of a home-based occupational therapy intervention in Spain. *Health & Social Care in the Community*, 26(5), 734-743. (Case series)

Stroke

Dawson, D. R., Anderson, N. D., Binns, M., Bar, Y., Chui, A., Gill, N., Linkewich, E., McEwen, S., Nalder, E., & Skidmore, E. (2024). Strategy-training post-stroke via tele-rehabilitation: A pilot randomized controlled trial. *Disability and Rehabilitation*, 46(1), 67-76.
PEDro-P score: 7/10

Hickin, J., Cruice, M., & Dipper, L. (2022). A systematically conducted scoping review of the evidence and fidelity of treatments for verb and sentence deficits in aphasia: Sentence treatments. *American Journal of Speech-Language Pathology*, 31(1), 431-462.

Lin Rose Sin, Y., Su Jing, J., Abu-Odah, H., Bayuo, J., Batalik, L., & Qin, J. (2024). Effects of virtual reality-based cognitive interventions on cognitive function and activity of daily living among stroke patients: Systematic review and meta-analysis. *Journal of Clinical Nursing*, 33, 1169-1184. **OPEN ACCESS**

Torinsson, M., Saldert, C., Rodseth Smith, S., Kristensson, J., & Longoni, F. (2024). Telerehabilitation with verb network strengthening treatment (vnest) in two participants with mild-to-moderate and moderate-to-severe aphasia: A single-case experimental design study. *Aphasiology*.
RoBiNT score: 19/30

Traumatic Brain Injury

Chavez Arana, C., van Ijzendoorn, M. H., Serrano-Juarez, C. A., de Pauw, S. S., & Prinzie, P. (2024). Interventions to improve executive functions in children and adolescents with acquired brain injury: A systematic review and multilevel meta-analysis. *Child Neuropsychology*, 30(1), 164-187. **OPEN ACCESS**

Multiple Sclerosis

Gay, M. C., Cassedanne, F., Barbot, F., Vaugier, I., Thomas, S., Manchon, E., Bensmail, D., Blanchere, M., & Heinzlef, O. (2024). Long-term effectiveness of a cognitive behavioural therapy (CBT) in the management of fatigue in patients with relapsing remitting multiple sclerosis (RRMS): A multicentre, randomised, open-label, controlled trial versus standard care. *Journal of Neurology, Neurosurgery & Psychiatry*, 95(2), 158-166. **OPEN ACCESS**
PEDro-P score: 7/10

Pagliari, C., Di Tella, S., Jonsdottir, J., Mendozzi, L., Rovaris, M., De Icco, R., Milanesi, T., Federico, S., Agostini, M., Goffredo, M., Pellicciari, L., Franceschini, M., Cimino, V., Bramanti, P., & Baglio, F. (2024). Effects of home-based virtual reality telerehabilitation system in people with multiple sclerosis: A randomized controlled trial. *Journal of Telemedicine and Telecare*, 30(2), 344-355.
PEDro-P score: 8/10

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'.