May 2024

NeuroBITE NEWSLETTER

Welcome to the May 2024 edition of our monthly NeuroBITE newsletter!

We are thrilled to present this feature to our supporters and anyone intrigued by research on cognitive, behavioral, and other treatments for psychological challenges stemming from acquired brain impairment (ABI). Inside, you'll discover a curated list of compelling intervention studies recently added to the NeuroBITE database.This month we highlight five Open Access articles, three of which are Systematic Reviews, ready for you to download for free!

We are also excited that NeuroBITE has successfully submitted an abstract to present a poster at the upcoming WFNR-NR-SIG in Coimbra, Portuagal (30 June - 1 July). Stand by for more details.

Happy reading!

Dementia

Hsieh, C.-J., Li, P.-S., Wang, C.-H., Lin, S.-L., Hsu, T.-C., & Tsai, C.-M. T. (2023). Socially assistive robots for people living with dementia in long-term facilities: A systematic review and meta-analysis of randomized controlled trials. *Gerontology*, 69(8), 1027-1042. **OPEN ACCESS**

Zhang, J., Yu, Z., Zhang, N., Zhao, W., Wei, B., He, R., Xue, H., Zhu, B., & Mao, Y. (2023). Does music intervention relieve depression or anxiety in people living with dementia? A systematic review and meta-analysis. *Aging & Mental Health*, 27(10), 1864-1875.

Dementia - Alzheimer's Disease, Mild Cognitive Impairment

Gonzalez-Martin, A. M., Aibar Almazan, A., Rivas Campo, Y., Rodriguez Sobrino, N., & Castellote Caballero, Y. (2023). Addressing depression in older adults with Alzheimer's through cognitive behavioral therapy: Systematic review and meta-analysis. *Frontiers in Aging Neuroscience*, 15, 1-11. **OPEN ACCESS**

Dementia - Parkinson's Disease

Seritan, A. L., Iosif, A.-M., Prakash, P., Wang, S. S., & Eisendrath, S. (2022). Online Mindfulness-Based Cognitive Therapy for People with Parkinson's Disease and Their Caregivers: a Pilot Study. *Journal of Technology in Behavioral Science*, 7(3), 381-395. **OPEN ACCESS**

Stroke

Pei, S., Weiwei, L., Mengqin, Z., & Xiaojun, H. (2023). Effect of an extension speech training program based on Chinese idioms in patients with post-stroke non-fluent aphasia: A randomized controlled trial. *PLoS ONE*, 18(2), 1-11. **OPEN ACCESS**
PEDro-P score: 8/10

TBI

Galimberti, A., Tik, M., Pellegrino, G., & Schuler, A.-L. (2024). Effectiveness of rTMS and tDCS treatment for chronic TBI symptoms: A systematic review and meta-analysis. *Progress in Neuro-Psychopharmacology & Biological Psychiatry*, 128, 1-13.

Stroke/TBI

Choe, Y. kyong, Asselin, A., Foster, T., Waymouth, T., & van Emmerik, R. (2023). Congruent vs. incongruent tasks in interdisciplinary stroke rehabilitation: a single-case report. *Disability and Rehabilitation*, 1–14.
RoBiNT score: 14/30

Davies, A., Rogers, J. M., Baker, K., Li, L., Llerena, J., das Nair, R., & Wong, D. (2023). Combined cognitive and psychological interventions improve meaningful outcomes after acquired brain injury: A systematic review and meta-analysis. *Neuropsychology Review*, 1-20. **OPEN ACCESS**

Multiple Sclerosis

Feinstein, A., Amato, M. P., Brichetto, G., Chataway, J., Chiaravalloti, N. D., Cutter, G., Dalgas, U., DeLuca, J., Farrell, R., Feys, P., Filippi, M., Freeman, J., Inglese, M., Meza, C., Motl, R. W., Rocca, M. A., Sandroff, B. M., & Salter, A. (2023). Cognitive rehabilitation and aerobic exercise for cognitive impairment in people with progressive multiple sclerosis (CogEx): A randomised, blinded, sham-controlled trial. *The Lancet Neurology*, 22(10), 912-924.
PEDro-P score: 7/10

Epilepsy

Mehrabi, F., & Tavakoli, M. (2022). The effectiveness of mindfulness-based stress reduction intervention for cognitive emotion regulation and cognitive reactivity in patients with epilepsy. *International Journal of Cognitive Therapy*, 15(4), 465-478.
PEDro-P score: 5/10

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'.