

September 2024

NeuroBITE

NEWSLETTER

Welcome to the September 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). Inside, you'll find a carefully curated list of new intervention studies recently added to the NeuroBITE database.

This month we are delighted to highlight the Clinical Guidance Paper regarding the delivery of Neuropsychological Interventions for Adults and Older Adults from a prominent group of Australian researchers and clinicians. Despite the wide array of neuropsychological interventions (as featured by NeuroBITE) it can often be confounding to know where to begin in supporting Adults and Older Adults with cognitive impairments. This extensive publication functions as a guide and includes a variety of issues for the considerations of clinicians. Best of all, it is Open Access allowing even those without institutional library access to read and learn.

Happy reading!

Stroke / Traumatic Brain Injury / Brain Tumour

Wong, D., Pike, K., Stolwyk, R., Allott, K., Ponsford, J., McKay, A., Longley, W., Bosboom, P., Hodge, A., Kinsella, G., & Mowszowski, L. (2023). Delivery of neuropsychological interventions for adult and older adult clinical populations: An Australian expert working group clinical guidance paper. *Neuropsychology Review*. **OPEN ACCESS**

Stroke

Chen, N. Y. C., Dong, Y., & Kua, Z. Z. J. (2023). Addressing mood and fatigue in return-to-work programmes after stroke: A systematic review. *Frontiers in Neurology*, 14, 2023. **OPEN ACCESS**

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Siponkoski, S.-T., Pitkaniemi, A., Laitinen, S., Sarkamo, E.-R., Pentikainen, E., Eloranta, H., Tuomiranta, L., Melkas, S., Schlaug, G., Sihvonen, A. J., & Sarkamo, T. (2023). Efficacy of a multicomponent singing intervention on communication and psychosocial functioning in chronic aphasia: A randomized controlled crossover trial. *Brain Communications*, 5(1), 1-13. **OPEN ACCESS**

PEDro-P score: 8/10

Tham, X. C., Phua, V. J. X., Ho, E. K. Y., Yan, T., Chen, N. Y. C., Zuo, L., Thompson, C. L., & Dong, Y. (2023). Train-your-brain program to reduce depression, anxiety, and stress in stroke survivors: A pilot community-based cognitive intervention study. *Frontiers in Neurology*, 14, 1-12. **OPEN ACCESS**

Traumatic Brain Injury

Austin, T. A., Hodges, C. B., Thomas, M. L., Szabo, Y. Z., Parr, S. B. S., Eschler, B. D., Lantrip, C. P., & Twamley, E. P. (2024). Meta-analysis of Cognitive Rehabilitation Interventions in Veterans and Service Members With Traumatic Brain Injuries. *Journal of Head Trauma Rehabilitation*, 1-15.

King, S. M., Stapert, S. Z., Winkens, I. P., van der Naalt, J. P. M. D., van Heugten, C. M., & Rijkeboer, M. M. (2024). Efficacy of an Intensive Exposure Intervention for Individuals With Persistent Concussion Symptoms Following Concussion: A Concurrent Multiple Baseline Single-Case Experimental Design (SCED) Study. *Journal of Head Trauma Rehabilitation*, 1-11. **OPEN ACCESS**

RoBiNT score: 17/30

Epilepsy

Kaur, K., Sharma, G., Dwivedi, R., Nehra, A., Parajuli, N., Upadhyay, A. D., Deepak, K. K., Jat, M. S., Ramanujam, B., Sagar, R., Mohanty, S., & Tripathi, M. (2023). Effectiveness of yoga intervention in reducing felt stigma in adults with epilepsy: A randomized controlled trial. *Neurology*, 101(23), e2388-e2400.

PEDro-P score: 9/10



Dementia

Ong, Y. C., Tang, A., & Tam, W. (2021). Effectiveness of robot therapy in the management of behavioural and psychological symptoms for individuals with dementia: A systematic review and meta-analysis. *Journal of Psychiatric Research*, 140, 381-394.

Parkinson's Disease

Bode, M., Sulzer, P., Schulte, C., Becker, S., Brockmann, K., Elben, S., Folkerts, A.-K., Ophey, A., Schlenstedt, C., Witt, K., Wojtecki, L., Evers, J., Maetzler, W., Kalbe, E., & Liepelt-Scarfone, I. (2023). Multidomain cognitive training increases physical activity in people with Parkinson's disease with mild cognitive impairment. *Parkinsonism & Related Disorders*, 113, 1-8.

PEDro-P score: 7/10

Alzheimer's Disease

Xiu, H., Liu, F., Hou, Y., Chen, X., & Tu, S. (2024). High-frequency repetitive transcranial magnetic stimulation (HF-rTMS) on global cognitive function of elderly in mild to moderate Alzheimer's disease: A systematic review and meta-analysis. *Neurological Sciences*, 45(1), 13-25.



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'.

