NeuroBITE
NEWSLETTER

Welcome to the June 2024 edition of our monthly NeuroBITE newsletter! You can sign up to receive the newsletter directly to your mailbox by following this link www.surveymonkey.com/r/6QDCMCT or scanning the QR code below.

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 six Open Access articles ready for you to download in full, for free! We have three systematic reviews and a review of a review. We profile four studies in the field of dementia including a case study by Apostal et al. (2023) that is a handy guide of "how-to" conduct CBT with for Generalised Anxiety Disorder with a patient with Parkinson's Disease.

We are excited that our NeuroBITE founder Professor Emerita Robyn Tate will be presenting on her seminal work in Single-Case Experimental Designs (SCEDs) as part of her Presidential Address at the WFNR-NR-SIG meeting in Coimbra, Portugal (30 June - 1 July). We hope to see you there.

Happy reading!

Dementia

Huang, L.-C., & Yang, Y.-H. (2022). The long-term effects of immersive virtual reality reminiscence in people with dementia: Longitudinal observational study. *JMIR Serious Games*, 10(3), 1-9. (Case series) **OPEN ACCESS**

Dementia - Mild Cognitive Impairment

Jones, K. T., Gallen, C. L., Ostrand, A. E., Rojas, J. C., Wais, P., Rini, J., Chan, B., Lago, A. L., Boxer, A., Zhao, M., Gazzaley, A., & Zanto, T. P. (2023). Gamma neuromodulation improves episodic memory and its associated network in amnestic mild cognitive impairment: A pilot study. Neurobiology of Aging, 129, 72-88. (Case series) **OPEN ACCESS**

Dementia - Alzheimer's Disease, Mild Cognitive Impairment

Abd-alrazaq, A., Alhuwail, D., Ahmed, A., & Househ, M. (2022). Effectiveness of serious games for improving executive functions among older adults with cognitive impairment: Systematic review and meta-analysis. JMIR Serious Games, 10(3), 1-19. **OPEN ACCESS**

Dementia - Parkinson's Disease

Apostol, A. E., Mohamed, B., Thomas, C., Williams, T., Mahon, S., Fisher, M., & Lewis-Morton, R. (2023). CBT for Generalized Anxiety Disorder in Parkinson's Disease: A Case Study. Clinical Gerontologist, 1-10.
RoBiNT score: 4/30

Stroke

Bjorkdahl, A., Rafsten, L., Petersson, C., K, S. S., & Danielsson, A. (2023). Effect of very early supported discharge versus usual care on activi-ties of daily living ability after mild stroke: a randomized controlled trial. Journal of Rehabilitation Medicine, 55(jrm12363), 1-10. **OPEN ACCESS**
PEDro-P score: 5/10

Henry, L., Leahy, S., McCurtin, A., & Boland, P. (2022). Evaluation of the evidence for self-management post-stroke within clinical practice guidelines for people with stroke: A systematic review. The British Journal of Occupational Therapy, 85(12), 923-946.

Mead, G., Gillespie, D., Barber, M., House, A., Lewis, S., Ensor, H., Wu, S., & Chalder, T. (2022). Post stroke intervention trial in fatigue (POSITIF): Randomised multicentre feasibility trial. Clinical Rehabilitation, 36(12), 1578-1589. **OPEN ACCESS**
PEDro-P score: 6/10

Straudi, S., Baluardo, L., Arienti, C., Bozzolan, M., Lazzarini, S. G., Agostini, M., Aprile, I., Paci, M., Casanova, E., Marino, D., La Rosa, G., Bressi, F., Sterzi, S., Giansanti, D., Perrero, L., Battistini, A., Miccinilli, S., Filoni, S., Sicari, M., . . . Morone, G. (2022). Effectiveness of robot-assisted arm therapy in stroke rehabilitation: An overview of systematic reviews. NeuroRehabilitation, 51(4), 559-576.

TBI

Aljabri, A., Halawani, A., Ashqar, A., Alageely, O., & Alhazzani, A. (2023). The Efficacy of Vestibular Rehabilitation Therapy for Mild Traumatic Brain Injury: A Systematic Review and Meta-analysis. Journal of Head Trauma Rehabilitation, 10-1097, 1-11.

Brain infections

Nweke, M., Nombeko, M., Govender, N., Akinpelu, A., Ukwuoma, M., & Ogunniyi, A. (2022). Aerobic exercise for HIV-associated neurocognitive disorders in individuals on antiretroviral therapy: A randomised controlled trial. Clinical Rehabilitation, 36(12), 1601-1612. **OPEN ACCESS**
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'.