

References:

1. Samokhvalov AV, Weber M. Early Outcomes of Repetitive Transcranial Magnetic Stimulation in Complex Clinical Population. *Eur Psychiatry*. 2023 Jul 19;66(Suppl 1):S158–9. doi: 10.1192/j.eurpsy.2023.389. PMID: PMC10596575.
2. Milev RV, Giacobbe P, Kennedy SH, Blumberger DM, Daskalakis ZJ, Downar J, Modirrousta M, Patry S, Vila-Rodriguez F, Lam RW, MacQueen GM, Parikh SV, Ravindran AV; CANMAT Depression Work Group. Canadian Network for Mood and Anxiety Treatments (CANMAT) 2016 Clinical Guidelines for the Management of Adults with Major Depressive Disorder: Section 4. Neurostimulation Treatments. *Can J Psychiatry*. 2016 Sep;61(9):561-75. doi: 10.1177/0706743716660033. Epub 2016 Aug 2. PMID: 27486154; PMID: PMC4994792.

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EPP245

Neuronavigated Transcranial Pulse Stimulation (TPS) with shock waves as a novel tool of noninvasive brainstimulation (NIB) for a long-term treatment of Alzheimer's disease

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Introduction: Alzheimer's disease (AD) is a very common cause of dementia and a common cause of death in elderly humans. No effective long-term treatment has been found so far. Recently developed treatments with antibodies have shown severe side effects of edema or intracerebral hemorrhage in a larger number of cases.

Objectives: Neuronavigated transcranial pulse stimulation (TPS) as a new non-invasive therapy method could represent a current alternative to standard treatments. In contrast to ultrasound stimulation (tFUS) TPS uses shock waves with a mechanical transduction. These shock waves allow an application to superficial brain structures as well as into areas deep in the brain without the induction of any unwanted thermal side effects. The stimulation of the target areas can be MRI-navigated with nearly a similar precision as in stereotactical procedures.

Methods: 85 out-patients with Alzheimer's disease with light to moderate symptoms received TPS-treatments with 6.000 pulses each session bilaterally in 6 sessions over 2 weeks into the frontal, parietal and temporal cortex (0.2 mJ/mm² 4 Hz - Neurolith by Storz Medical). The treatment was repeated with a single booster session every 6 weeks. Pulses were individually neuronavigated by current MRI-images. Executive functions were tested using the Stroop-Test (colour-word-interference-test). Patients with Alzheimer's Disease normally present only poor results in the Stroop-Test. We tested with a pre – post design (t₀ pre stimulation : t₁ after 6 sessions, two weeks later as well as t₂ 6 months later). The mood of the patients was measured using the BDI on t₀, t₁ and t₂.

Results: TPS-stimulation showed strong ameliorating effects on performance in the Stroop-Test. The mean-score of the Stroop-test was diminished significantly (pre vs. post ; p < 0.05 – paired T-test) in a comparison of t₀ to t₁. This effect was preserved during an interval of 6 months (t₂). Single patients showed extraordinary

improvements by shortening completer times in the Stroop-Test by half.

Depressive symptoms of the patients were also diminished by the treatment. The BDI score decreased from 20.1 (t₀) to 9.7 (t₁), and 9,1 (t₂) respectively.

No significant side-effects occurred during all the sessions in any of the patients.

Conclusions: The results of this trial show that cognitive impairments of executive functions and depressive symptoms in Alzheimer's disease may be ameliorated using TPS as a noninvasive neuronavigated brain stimulation method. No severe side-effects were observed. In the meantime beneficial effects of shockwaves with low intensity have also been shown in the fields of dermatology, orthopedics and cardiac surgery.

Different mechanisms of action of TPS are still under investigation.

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Rehabilitation and Psychoeducation**EPP248**

The Relationship Between Sensory Processing and Executive Functions in Adults with and without Neurodevelopmental Disorders

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Introduction: Existing literature highlights unique sensory processing patterns and decreased executive functions (EF) in adults with neurodevelopmental disorders (NDD). However, most studies have focused on specific diagnoses, such as Attention-Deficit Hyperactivity Disorder or Specific Learning Disabilities, and have used smaller sample sizes, indicating a need for broader and more comprehensive research.

Objectives: Based on prior research conducted in the same laboratory, the current study aimed to comprehensively evaluate sensory processing patterns and EF in adults with NDD compared to controls, as well as to explore the relationships between these characteristics within each group.

Methods: The study sample included 290 adults (aged 20–50 years), comprising 149 individuals with NDD and 141 matched controls. Participants completed the Adolescent/Adult Sensory Profile (AASP) and the Adult Behavior Rating Inventory of Executive Function (BRIEF).

Results: Significant group differences were found in the AASP scores (F(4,285) = 42.05, p < .001, η² = 0.37), with variations in three sensory processing subscales: low registration (F(1,288) = 149.92, p < .001, η² = 0.34), sensitivity (F(1,288) = 103.97, p < .001, η² = 0.26), and avoidance (F(1,288) = 50.06, p < .001, η² = 0.48), though not in sensory seeking. Additionally, significant differences were observed in the BRIEF (F(5,284) = 67.58, p < .001) across all nine subscales and indexes. Notably, significant correlations were identified between BRIEF scores and three AASP subscales in both groups: low registration (control: r = .50, p < .001;

NDD: $r = .54, p < .001$), sensitivity (control: $r = .45, p < .001$; NDD: $r = .47, p < .001$), and avoidance (control: $r = .45, p < .001$; NDD: $r = .42, p < .001$).

Conclusions: This study highlights the distinct sensory processing patterns and EF challenges in adults with NDD compared to controls. The findings also reveal a consistent relationship between sensory processing and EF across both groups. These insights enhance the understanding of the interplay between sensory and executive functioning, emphasizing the importance of considering these characteristics at assessment and intervention of adults with NDD.

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EPP249

Key Components of Cognitive Remediation for Schizophrenia: A Bayesian Network Meta-Analysis

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Introduction: Cognitive impairments are strongly associated with impaired everyday functioning in individuals with schizophrenia, and cognitive remediation (CR) has been identified as effective treatment. However, uncertainty remains regarding the most effective components of CR.

Objectives: To identify (1) the most effective combination of core ingredients of CR (cognitive exercises, presence of a therapist, cognitive strategies, and generalization activities) and (2) the most effective type of CR to improve everyday functioning in individuals with schizophrenia (computer-assisted cognitive remediation, single domain computer-assisted cognitive remediation, social cognition interventions, paper and pencil interventions, integrative approaches, and combination approaches).

Methods: PubMed, PsycInfo, Medline, Embase were searched literature from inception until November 25, 2022. Reference lists of included studies and previous meta-analyses were searched for relevant studies. We included randomized controlled trials comparing CR with any control condition or a different type of CR, assessing everyday functioning pre- and post-intervention in individuals with schizophrenia. The studies were selected independently by two reviewers. We followed the PRISMA guidelines. Study data were extracted independently by two reviewers. Data were analyzed using Bayesian random-effects network models. Trial methodological quality was evaluated with the Clinical Trials Assessment Measure. Risk of bias was evaluated. Primary outcomes were changes in functioning and cognition from baseline to after

CR and from baseline to followup (min. 3 months). Literature search was updated in September 2024.

Results: 86 studies and 6076 participants were included. For both outcomes, the most effective constellation of core elements of CR were cognitive exercises, CR provided by a therapist and the use of generalization procedures (functioning: $g = 0.31, 95\% \text{ CrI } [0.14, 0.47]$; cognition: $g = -0.23, 95\% \text{ CrI } [0.03, 0.42]$). Moreover, only combinations that included both cognitive exercises and a therapist were more effective than TAU. All four core elements were necessary to observe improved functioning at follow-up. For the specific types of CR, none was superior to any other CR type. All CR types were more effective in improving functioning compared to TAU ($g = 0.19-0.45$). Study quality did not influence the results. Results will be updated if necessary after inclusion of the updated literature search.

Conclusions: The findings indicate that the effectiveness of CR depends on the inclusion of four essential elements—cognitive exercises, therapist involvement, strategies, and generalization activities—rather than on the specific type of CR intervention. An update to the definition of CR is recommended.

Disclosure of Interest: None Declared

EPP250

The Family Mental Health Cafés: A psychoeducation intervention to diminish stigma and isolation for families living with mental illness

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Introduction: Psychoeducation is a well-supported intervention in psychiatry aimed at improving outcomes for patients with serious mental disorders and their families. It primarily focuses on enhancing family understanding of the illness, reducing stress, and fostering a supportive environment for the patient. However, traditional psychoeducation often emphasizes increasing caregivers' capacity to manage the illness, rather than addressing the family as a unit coping with care needs and the stigma associated with mental illness. Family mental health cafés have been developed to address these broader issues.

Objectives: The aim of this study was to explore the experiences of participants in family mental health cafés and evaluate its impact on feelings of stigma and isolation.

Methods: The Family Mental Health Cafés were implemented in five Ontario cities from 2018 to 2019, these cafés were organized in collaboration with the Canadian Mental Health Association. They drew on the World Café and Death Café models, focusing on caregiving and care-receiving within the family unit and its interactions with the community. Discussions included managing illness and other stressors, successful strategies, and improvements needed for family well-being. Participants completed evaluations with both closed and open-ended questions

Results: A total of 67 individuals participated, identifying as diagnosed individuals, family members, service providers, or combinations thereof. Sixty-six completed evaluations, with 99% finding the cafés well-planned and engaging, and 88% recommending them to others. Qualitative feedback emphasized the value of shared