

worse task accomplishment on the untrained task (untrained condition change z scores: EM = +4.06; CS = -13.69). The training did not reduce errors, as error rates increased for both participants on the trained task.

**Conclusions:** The participants presented in this case study exhibited comparable cognitive profiles, including marked anterograde amnesia. Our results suggest that repeated training in a virtual context can improve specific aspects of functioning on real, life everyday tasks. Further, according to the goal-control framework, repeated practice reduces the decay of the task goal, as represented by greater task accomplishment, but does not improve executive control over the task execution. Important future directions are to determine if people with different cognitive profiles will demonstrate different benefits from VK training and to examine if virtual training of personally relevant, everyday tasks can promote independent living and improve quality of life.

**Categories:** Cognitive Intervention/Rehabilitation

**Keyword 1:** aging disorders

**Keyword 2:** cognitive functioning

**Keyword 3:** dementia - Alzheimer's disease

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## 86 Subjective Executive Dysfunction Mediates Relationship Between Perceived Sleep Quality and Societal Participation in Veterans with TBI

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**Objective:** Perceived poor sleep quality is the most commonly reported issue among veterans with a history of mild traumatic brain injury (mTBI). Poor sleep can impact aspects of objective and subjective executive functioning abilities (e.g., planning, organization, decision-making) and lead to decreased societal

participation. However, less is known about how perceived executive dysfunction impacts the relationship between perceived poor sleep and societal participation in veterans with a prior history of mTBI. We hypothesized that executive dysfunction mediates the relationship between subjective sleep quality and societal participation.

**Participants and Methods:** Participants included sixty-two U.S. veterans [Age: M=41.73 (SD=13.19); Education: M=15.16 (SD=2.20); 14.5% female]. The participants completed the Mayo-Portland Adaptability Inventory - 4 (MPAI-4; total scores), the Behavior Rating Inventory of Executive Function - Adult (BRIEF-A; subscale planning/organizing), and the Pittsburg Sleep Quality Index (PSQI; total scores). 21 participants met diagnostic criteria for Post-traumatic stress disorder (PTSD) [as determined by a cutoff score of 45 on the PTSD Checklist for DSM-5 (PCL-5)]. A mediation analysis was utilized to examine the impact of executive functions on the relationship between perceived sleep quality and societal participation.

Mediation analyses were conducted via linear regression modeling using SPSS Version 27. Post hoc analyses were conducted to control for PTSD, which is common in veteran populations.

**Results:** The total PSQI scores significantly predicted MPAI-4 total scores  $F(1, 53) = 16.740$ ,  $p < .001$  ( $R^2 = .55$ ) when controlling for PTSD diagnoses. A mediation analysis showed that BRIEF-A Planning/Organizing T-scores partially mediate the relationship between PSQI scores and MPAI-4 scores when controlling for PTSD diagnoses  $F(2, 54) = 12.055$ ,  $p < .001$  ( $R^2 = .61$ ).

**Conclusions:** Results suggest that perceived sleep quality impacts societal participation. However, how patients perceive their executive functioning abilities partially mediates the relationship between perceived sleep quality and societal participation, such that perceived poor sleep quality leads to reduced societal participation when there is subjective executive dysfunction. Therefore, clinical interventions should focus on the cognitive rehabilitation of executive functioning among veterans with a history of mTBI to improve their subjective experience. Ultimately, these efforts may improve veterans' participation and utilization of healthcare services.

**Categories:** Cognitive Intervention/Rehabilitation

**Keyword 1:** executive functions

**Keyword 2:** sleep

**Keyword 3:** traumatic brain injury

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### 87 Suitability of the I-InTERACT-North Parenting Program for families with autistic children

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**Objective:** I-InTERACT-North is a stepped-care telepsychological parenting intervention designed to promote positive parenting skills and improve child behaviour. Initially developed for children with traumatic brain injury, our pilot study has shown efficacy in increasing positive parenting skills and reducing problem behaviours for children with early brain injury (e.g., stroke, encephalopathy). Recently, the program has expanded to include children with neurodevelopmental disorders, including Autism Spectrum Disorder. Although positive parenting programs (e.g., Parent-Child Interaction Therapy) can be effective for autistic children, it is unknown whether the goals most important to these families can be addressed with I-InTERACT-North program. An examination of suitability and preliminary efficacy was conducted.

**Participants and Methods:** Parent participants of autistic children between 3 and 9 years (n=20) were recruited from the neonatal, neurology, psychiatry, or cardiology clinics at The Hospital for Sick Children and the Province of Ontario Neurodevelopmental Disorders (POND)

Network. Top problems, as reported by parents at baseline, were analyzed qualitatively through a cross-case analysis procedure in order to identify common themes and facilitate generalizations surrounding concerning behaviours. Parent-reported intensity of their children's top problem behaviours on a scale from 1 ("not a problem") to 8 ("huge problem") were quantified. To explore preliminary program efficacy, t-tests were used to compare pre- and post-intervention problems and intensity on the Eyberg Child Behavior Inventory (ECBI) (n=16). **Results:** A total of 56 top problem data units were examined, with convergent thematic coding on 53 of 56 (94.6% inter-coder reliability). Four prevalent, high-agreement themes were retained: emotion dysregulation (19; 33.9%), non-compliance (12; 21.4%), sibling conflict (7; 12.5%), and inattention and hyperactivity (7; 12.5%). Average problem intensity for these themes ranged from 5.85 to 6.53 (where 8 is greatest impairment) with emotion dysregulation having the highest intensity (6.53) compared to the others. Scores on the ECBI were lower post-intervention (Intensity scale: M= 59.06, SD= 8.1; Problem scale: M= 60.69, SD= 11.5) compared to pre-intervention (Intensity scale: M= 61.19, SD= 10.4; Problem scale: M= 64.31, SD= 11.7), but small sample size precluded detecting statistical significance (p's = .16 and .07, respectively).

**Conclusions:** Thematic analysis of top problems identified by parents of autistic children suggested that concerns were transdiagnostic in nature, and represent common treatment targets of the I-InTERACT-North program. Though challenging behaviours related to restricted interests or repetitive behaviours may exist in our sample, parental behavioural goals appeared to align with the types of concerns traditionally raised by participants of the program, supporting a transdiagnostic approach. Preliminary data point to positive treatment outcomes in these families.

**Categories:** Cognitive Intervention/Rehabilitation

**Keyword 1:** cognitive rehabilitation

**Keyword 2:** autism spectrum disorder

**Keyword 3:** pediatric neuropsychology

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