

Correspondence: Katherine Hackett Temple
University katherine.hackett@temple.edu

4 Ushering in Modern and Objective Ways of Assessing Financial Decision Making in Clinical Settings: The Development and Validation of an Online Money Management Credit Card Task

Preeti Sunderaraman¹, Silvia Chapman²,
Whitney Hartstone², Jillian L Joyce², Yaakov
Stern², Adam M Brickman², Stephanie
Cosentino²

¹Boston University School of Medicine, Boston,
MA, USA. ²Columbia University Medical Center,
New York, New York, USA

Objective: Historically, assessment of financial decision making (FDM) has largely relied on self- or informant-reports, and paper-and-pencil tests. However, subjective report is prone to under/over-estimation biases, and most available tests probe increasingly outdated tasks such as writing checks and checkbook management. Advances in technology have made online methods one of the most common and preferred styles of managing money. There is thus a critical need to develop modern and objective methods to assess financial decision making that can be used in clinical settings. The current study aimed to develop and validate a novel, simulated online money management (OMM) credit card task mimicking a real-world task.

Participants and Methods: Development. The OMM task was conceptualized based on collaborations with a diverse team of experts spanning neuropsychology, geriatrics, computer science, and economics. **Administration.** The task involves several sub-tasks including logging into a simulated credit card account, navigating a few pages to download a statement for a specific month, answering questions about where certain pieces of information are in the statement, identifying erroneous transactions in the account activity section, and answering questions involving practical aspects of managing a credit card. **Pilot phase.** Using an iterative process, the task was refined and piloted in ten participants.

Validation. Performance was examined in relation to an existing online automated teller

machine (ATM) task. **Design & Setting.** Cross-sectional, community-based prospective study.

Measures: OMM task. The newly developed OMM credit card task consists of two broad areas, (i) online navigation and (ii) content-focused (simple literacy, complex literacy, monitoring, awareness). **ATM task.** This measure consists of sequential tasks such as checking the balance in one's account, transferring money between accounts, and withdrawing cash. Both the OMM and ATM tasks were administered remotely by a neuropsychologist using Zoom and Team Viewer on a Dell laptop.

Participants: Thirty-five cognitively healthy older adults were included with mean age=70.06 years (SD=3.82) and mean education=21.89 (SD=1.76). 72% were women, the majority were White (77%) while 20% were Black and 3% belonged to other races; 91% were non-Hispanic.

Statistics & Metrics: Bivariate correlations between the OMM task, ATM task and demographic variables were examined. Time and steps/clicks to complete the OMM task were the primary outcome metrics.

Results: All participants were able to complete the OMM task. No significant associations were found between demographics (age, gender, education) and OMM metrics, and among OMM metrics (time and clicks). Significant associations in the expected direction were present between the OMM and ATM tasks. Time taken to answer the questions on the OMM task was associated with time required to complete the ATM task ($r = 0.57$, $p < 0.001$). Increased number of clicks on the OMM task was associated with increased number of errors ($r = 0.54$, $p < 0.001$) and increased time to complete the ATM task ($r = 0.41$, $p = 0.01$).

Conclusions: This is one of the first studies to develop and demonstrate the validity of a technologically based and practically relevant measure of financial decision making. Studies are ongoing to more comprehensively understand the psychometric properties of this novel task.

Categories: Teleneuropsychology/ Technology

Keyword 1: decision-making

Keyword 2: ecological validity

Keyword 3: everyday functioning

Correspondence: Preeti Sunderaraman, Ph.D.
Assistant Professor of Neurology Boston
University School of Medicine Department of

Neurology Medical Campus 72 East Concord Street Massachusetts 02118 The Framingham Heart Study - Brain Aging Program 73 Mount Wayte Avenue Framingham, Massachusetts 01702 Email:psun@bu.edu

5 Cognitive Rehabilitation Using Teleneuropsychology. A Cohort Study in South America

Carlos Martinez Canyazo¹, Rodrigo S Fernandez², María B Helou¹, Micaela Arruabarrena¹, Nicolas Corvalan¹, Agostina Carello¹, Paula Harris¹, Monica Feldman¹, Ismael Luis Calandri¹, Maria E Martin¹, Ricardo F Allegri¹, Lucía Crivelli¹

¹Fleni, Buenos Aires, Argentina. ²Instituto de Fisiología, Biología Molecular y Neurociencias (IFIBYNE), CONICET-Universidad de Buenos Aires, Buenos Aires, Argentina

Objective: The COVID-19 pandemic has affected the continuity of cognitive rehabilitation (CR) worldwide. However, the use of teleneuropsychology (TNP) to provide CR has contributed significantly to the continuity of treatment. The objective of this study was to measure the effects of CR via the TNP on cognition, neuropsychiatric symptoms, and memory strategies in a cohort of patients with Mild Cognitive Impairment (MCI).

Participants and Methods: A sample of 60 patients (60% female; age: 72.4±6.96) with MCI according to Petersen criteria was randomly divided into two groups: 30 cases (treatment group) and 30 controls (waiting list group). Subjects were matched for age, sex, and MMSE or MoCA.

The treatment group received ten weekly CR sessions of 45 minutes weekly. Pre-treatment (week 0) and post-treatment (week 10) measures were assessed for both groups. Different Linear Mixed Models were estimated to test treatment effect (CR vs. Controls) on each outcome of interest over Time (Pre/Post), controlling for Diagnosis, Age, Sex, and MMSE/MoCA performance.

Results: A significant Group (Control / Treatment) x Time (pre / post) interaction revealed that the treatment group at 10 weeks had better scores in cognitive variables: memory (RAVLT learning trials p=0.030; RAVLT delayed recall p=0.029), phonological fluency(p=0.001),

activities of daily living (FAQ p=0.001), satisfaction with memory performance (MMQ Satisfaction p=0.004) and use of memory strategies (MMQ Strategy p=0.00), and a significant reduction of affective symptomatology: depression (GDS p=0.00), neuropsychiatric symptoms (NPIQ p=0.045), Forgetfulness (EDO-10 p=0.00), Stress (DAS Stress p=0.00).

Conclusions: This is the first study to test CR using teleNP in South America. Our results suggest that CR through teleNP is an effective intervention to improve performance on cognitive variables and reduce neuropsychiatric symptomatology compared to patients with MCI. These results have great significance in the context of the COVID-19 pandemic in South America, where teleNP is proving to be a valuable tool.

Categories: Teleneuropsychology/ Technology

Keyword 1: teleneuropsychology

Keyword 2: cognitive rehabilitation

Keyword 3: mild cognitive impairment

Correspondence: Lucia Crivelli Fleni, Buenos Aires Argentina lcrivelli@fleni.org.ar

Paper Session 04: Multi-cultural and diversity topics in pediatric populations

11:45am - 1:15pm

Thursday, 2nd February, 2023

Pacific Ballroom E

Moderated by: Rowena Ng

1 Psychometric Characteristics of the Grenada Learning and Memory Scale: An Innovative Tool for Preschool Memory Assessment in Resource-Limited Regions

Roberta Evans¹, Lauren Mohammed¹, Kemi S Burgen^{1,2}, Rashida Isaac¹, Toni Murray¹, Patricia Kandle², Mira E Cheng³, Randall Waechter^{1,2}, Barbara Landon^{1,2}, Karen Blackmon⁴

¹Caribbean Center for Child Neurodevelopment, Windward Islands Research and Education