the CVLT-II. Confrontation naming significantly predicted only long-delay free recall (ß =.31, p = .01). Processing speed predicted verbal learning (ß = .51, p < .01), short-delay free recall (ß = .35, p = .03), and long-delay free recall (ß = .44, p < .01). After adjusting for processing speed, letter fluency significantly predicted learning (ß = .23, p = .05) and discriminability (ß = .33, p = .04). Category fluency significantly predicted learning only (ß = .28, p = .04). Finally, confrontation naming significantly predicted only long-delay free recall (ß= .28, p = .01).
Conclusions: While processing speed was associated with verbal learning and recall, components of language predicted variance in verbal learning in PD that was not accounted for by speed. Additionally, discriminability was related to aspects of language that are more reliant on executive functioning. It is therefore suggested that verbal memory in PD is interpreted within the context of one's language ability. Other potential mechanisms and clinical implications are discussed.

Categories: Movement and Movement Disorders
Keyword 1: language
Keyword 2: memory disorders
Correspondence: Jennifer R. Miller. Department of Neurology, Northwell Health, Manhasset, NY. jrmiller@mail.yu.edu

19 Oral Versus Written Trail Making Test Scores in Patients with Movement Disorders

Joshua T Fox-Fuller[1,2], Kayci L Vickers[1], Jessica L Saurman[1], Rachel Wechsler[1], Amanda Eakin[1], Felicia C Goldstein[1]
[1]Emory University School of Medicine, Atlanta, GA, USA. [2]Boston University Department of Psychological and Brain Sciences, Boston, MA, USA

Objective: During the COVID-19 pandemic the Oral Trail Making Test (O-TMT) was frequently used as a telehealth-compatible substitute for the written version of the Trail Making Test (W-TMT). There is significant debate among neuropsychologists about the degree to which the O-TMT measures the same cognitive abilities as the W-TMT (i.e., processing speed for part A and set-shifting for part B). Given the continued use of the O-TMT – especially for patients with fine-motor or visual impairments – we examined how O-TMT and W-TMT scores were correlated in patients with movement disorders.
Participants and Methods: Between April 2021 and July 2022 thirty individuals with movement disorders (n=27 idiopathic Parkinson's disease [PD]; n=1 drug-induced PD; n=1 progressive supranuclear palsy [PSP]; n=1 possible PSP) completed in-person neuropsychological evaluations at the Emory Brain Health Center in Atlanta, GA. The patients were on average 71.3 years old (SD=7.5 years), had 16 years of education (SD=2.8 years), and the majority were non-Hispanic White (n=27 White; n=3 African American) and male (n=17). In addition to other neuropsychological measures, these patients completed both the O-TMT and the W-TMT. O-TMT and W-TMT administration was counterbalanced across patients and took place thirty-minutes apart. Raw scores (i.e., time in seconds) to complete O-TMT and W-TMT part A and part B, as well as discrepancy scores (part B – part A), were used for statistical analysis; a raw score of 300 seconds was assigned when a participant could not complete that section of the O-TMT or W-TMT. Given the non-normal distribution of the data, Spearman correlations were performed between O-TMT and W-TMT scores.
Results: Ten patients were unable to perform W-TMT part B. Of these, seven patients could also not perform O-TMT part B. Part A scores on O-TMT and W-TMT were not significantly correlated (r_s = 0.27, p = .15). In contrast, part B scores were strongly correlated, such that slower performances on O-TMT part B corresponded with slower performances on W-TMT part B (r_s = 0.82, p < .001). Discrepancy scores for the O-TMT and W-TMT were also significantly correlated, such that larger part A and part B discrepancy scores on O-TMT corresponded with larger discrepancy scores on W-TMT (r_s = 0.78, p <.001). The pattern of results was replicated when examining these correlations only in patients who could complete all parts of O-TMT and W-TMT (n=19); part A scores of the O-TMT and W-TMT were again not correlated (r_s = -0.20, p = .41), whereas the part B scores (r_s = 0.54, p = .02) and discrepancy scores (r_s = 0.59, p = .008) were significantly correlated.
Conclusions: Results suggest that an oral version of the Trail Making Test shows promise

https://doi.org/10.1017/S1355617723006902 Published online by Cambridge University Press

as an alternative to the written version for assessing set shifting abilities. These findings are limited to patients with movement disorders, and future research with diverse patient populations could help determine whether O-TMT can be generalized to other patient groups. Additionally, future research should examine whether O-TMT scores obtained via virtual testing correspond with W-TMT scores obtained in-person.

Categories: Movement and Movement Disorders
Keyword 1: Parkinson's disease
Keyword 2: psychometrics
Keyword 3: executive functions
Correspondence: Joshua T. Fox-Fuller, Emory University School of Medicine & Boston University Department of Psychological and Brain Sciences, jtfuller@bu.edu

20 Laterality of Motor Symptom Onset is Not Associated with Cognitive Performance or Mood Symptoms in a Sample of 600 Individuals with Idiopathic Parkinson's Disease"

Joshua Gertler, Lauren Kenney, Adrianna M Ratajska, Francesca V Lopez, Katie Rodriguez, Rachel Schade, Dawn Bowers
University of Florida, Gainesville, FL, USA

Objective: Parkinson's disease (PD) is typically characterized by unilateral onset of motor symptoms (i.e., tremors, rigidity) which is caused by dopaminergic degeneration of the substantia nigra that influences basal ganglia-prefrontal circuitry. Over time, motor symptoms become more bilateral, though continue to remain asymmetric. Many neuropsychological studies suggest that laterality of motor onset may be linked to hemispheric specific cognitive or mood changes. Namely, worse verbal/language performance may be present in individuals with right body (left hemisphere) onset and conversely for visuospatial performance, with depression symptoms relating more so to individuals with right body (left hemisphere) onset. To date, findings are often inconsistent, with some studies showing evidence for laterality effects and others not. The basis for this inconsistency is unclear, though one possibility relates to small sample sizes and varying methodologies. Thus, the goal of this study was to examine potential cognitive and mood laterality effects in a large clinical sample of individuals with PD.
Participants and Methods: Participants included a convenience sample of 600 nondemented individuals with idiopathic PD from the University of Florida Fixel Institute Movement Disorders Center. As a group, participants were around 60 years of age (Mean Age=63.9+9.4), well educated (Mean years=14.9+2.7), predominantly male (70%), and white non-Hispanic (93%). Side of initial motor symptom onset was based on self-report: Right (N=337) and Left (N=263). Approximately 79% were tremor predominant. All received mood and neurocognitive measures as part of standard clinical care, including indices of executive function (Stroop Color-Word, Trails B, Letter Fluency), recent verbal memory (delayed recall: Hopkin's Verbal Learning Test, WMS-III Logical Memory), language (Boston Naming Test, Animal fluency), visuospatial skills (Judgment of Line Orientation, Facial Recognition Test). Evaluation of emotion symptoms included: depression (Beck Depression Inventory-II), apathy (Apathy Scale), and anxiety (State-Trait Anxiety Inventory). Analyses used raw scores from these measures. Due to non-normality of most measures' distributions, laterality effects were examined using bootstrapped multivariate methods (multivariate analysis of variance [MANOVA]). Separate MANOVA's were run for each cognitive domain (i.e., EF, language, etc.) and mood measures.
Results: The right and left sided onset groups did not significantly differ in demographic (age, education, sex) or disease characteristics (duration, PD subtype). Results of the MANOVA's with cognitive variables were all nonsignificant broadly (all with F's ranging from .33 to .94) and at the single test level. Similarly, the left and right onset groups did not significantly differ (a=0.05) across standard scales of depression (F=0.031), anxiety (Trait F=0.463; State F=3.29), and apathy (F=0.74).
Conclusions: We found no evidence that laterality of initial motor symptoms influenced cognitive or mood symptoms in a large cohort of 600 individuals with PD. These findings raise questions about importance of motor onset laterality for cognitive and emotion related changes in PD. Future studies should move beyond self-report and behavioral motor scales

https://doi.org/10.1017/S1355617723006902 Published online by Cambridge University Press