Reduced mind wandering in patients with Parkinson's disease

Tal Geffen, Avner Thaler, Gadi Gilam, Eti Ben Simon, Nimrod Sarid, Tanya Gurevich, Nir Giladi, Hertzel Shabtai, Jennifer Zitser, Eduardo A. Schilman, Haggai Sharon

PII: S1353-8020(17)30325-5
DOI: 10.1016/j.parkreldis.2017.08.030
Reference: PRD 3409

To appear in: Parkinsonism and Related Disorders

Received Date: 26 March 2017
Revised Date: 26 August 2017
Accepted Date: 30 August 2017


This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.
Reduced mind wandering in patients with Parkinson's disease

Tal Geffen\textsuperscript{1,2,8}, Avner Thaler\textsuperscript{1,3,5,6}, Gadi Gilam\textsuperscript{1,4}, Eti Ben Simon\textsuperscript{1}, Nimrod Sarid\textsuperscript{1}, Tanya Gurevich\textsuperscript{3,5,6}, Nir Giladi\textsuperscript{3,5,6}, Hertzl Shabtai\textsuperscript{3}, Jennifer Zitser\textsuperscript{3}, Eduardo A. Schilman\textsuperscript{2} and Haggai Sharon\textsuperscript{1,6,7}

\textsuperscript{1} Functional Brain Center, Wohl Institute for Advanced Imaging, Tel-Aviv Sourasky Medical Center
\textsuperscript{2} Tel Aviv-Yafo Academic College, Tel-Aviv, Israel
\textsuperscript{3} Movement disorders Unit, Institute of Neurology, Tel Aviv Sourasky Medical Center, Tel-Aviv, Israel
\textsuperscript{4} School of Psychological Sciences, Tel Aviv University, Tel-Aviv, Israel
\textsuperscript{5} Sagol school of neuroscience, Tel Aviv University, Tel-Aviv, Israel
\textsuperscript{6} Sackler School of Medicine, Tel Aviv University, Tel-Aviv, Israel
\textsuperscript{7} Institute of pain medicine, Tel Aviv Sourasky Medical Center, Tel-Aviv, Israel
\textsuperscript{8} Departments of Neurosurgery, Tel Aviv Sourasky Medical Center, Tel-Aviv, Israel

ABSTRACT

Background
Mind Wandering (MW) refers to the process of disengaging from the immediate external environment and participating in internally driven mentation. This process has been suggested to be supported by a distributed set of brain regions, collectively referred to as the Default Mode Network (DMN). Recently, reduced recruitment and connectivity of the DMN has been described in Parkinson’s disease (PD) patients compared to healthy controls. We thus aimed to explore whether PD patients with normal cognitive test scores show differential MW capabilities compared to healthy controls.

Methods
Thirty PD patients and thirty age-matched controls, all with a Montreal cognitive assessment (MoCA) score of 26 or above, performed a novel yet validated thought-sampling paradigm used to assess the frequency and extent of MW irrespective of cognitive load in which participants were asked to observe a series of geometric shapes and describe their thoughts after watching them. Shapes were presented one at a time for varying durations across nine trials.

Results
PD patients showed significantly less MW compared to the control. ANCOVA revealed a significant interaction indicating that the difference in MW scores was driven by trials with short stimulus presentation times.

Conclusions
These findings provide evidence for decreased MW in PD patients. We propose that this is due to difficulties in performing MW within short time frames.

Key words: Mind Wandering; Parkinson's disease
دریافت فوری
متن کامل مقاله

امکان دانلود نسخه تمام متن مقالات انگلیسی
امکان دانلود نسخه ترجمه شده مقالات
پذیرش سفارش ترجمه تخصصی
امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
امکان دانلود رایگان ۲ صفحه اول هر مقاله
امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
دانلود فوری مقاله پس از پرداخت آنلاین
پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات