Semantic Inhibition Impairment in Mild Cognitive Impairment: A Distinctive Feature of Upcoming Cognitive Decline?

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Abstract: This study aimed to measure semantic inhibitory capacities in persons with a diagnosis of Alzheimer's disease (AD) or mild cognitive impairment (MCI), in healthy older and younger adults. This was done by relying on a computerized adaptation of the Hayling task, designed to diminish the likelihood of using alternative noninhibitory strategies. Participants with both AD and MCI showed impaired performance on the inhibition condition. Participants with AD showed both poorer score and an increased number of errors, whereas persons with MCI obtained lower score. There was also an effect of normal aging in the inhibition condition when considering reaction time only. In participants with MCI and AD, there was a significant correlation between lexico-semantic capacities and performance on the automatic condition. Follow-up analysis revealed that participants with MCI who experienced a subsequent significant cognitive decline had impaired performance in the inhibition condition at the time of the experiment, while participants with MCI who remained stable did not. Overall, results indicate that semantic inhibition of a prepotent response is impaired in participants with MCI and may have predictive value regarding future decline, supporting its prognostic role in the early identification of dementia. © 2009 American Psychological Association.

Author Keywords: Alzheimer's disease; executive functions; Hayling; inhibition; mild cognitive impairment

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References:
1. Albert, M., Blacker, D., Moss, M.B., Tanzi, R., McArdle, J.J., Longitudinal change in cognitive performance among
25. Folstein, M.F., Folstein, S.E., McHugh, P.R., "Mini-mental state": A practical method for grading the cognitive state of patients for the clinician (1975) Journal of Psychiatric Research, 12, pp. 189-198
36. Mattis, S., (1988) Dementia rating scale, , Psychological Assessment Resources, Odessa, FL


48. Rey, A., (1959) Test de copie d'une figure complexe: Manuel [The Rey Complex Figure Test], , Les Éditions du Centre de Psychologie Appliquée, Paris


60. Tipper, S., Less attentional selectivity as a result of declining inhibition in older adults (1991) Bulletin of the Psychonomic Society, 29, pp. 45-47


64. Wechsler, D., (1997) Échelle d'intelligence de Wechsler pour adultes (IIIème Ed.) [Wechsler Adult Intelligence Scale (3rd ed.)], , Centre de Psychologie Appliquée, Paris


