(P05) COGNITIVE IMPAIRMENTS IN RELAPSING REMITTING MULTIPLE SCLEROSIS: A QUANTITATIVE INVESTIGATION

Background: Researchers in the last few decades, employing tests developed in cognitive psychology and neuropsychology, have attempted to understand the specific cognitive deficits associated with MS. Though there is consensus regarding the presence of cognitive impairment in these domains, studies differ as to the nature of these cognitive impairments and the specific tasks that are used in the assessment of cognitive deficits.

Objective: In this meta-analytic review of 57 studies with 3891 participants, the primary goal was to investigate the nature and pattern of cognitive impairments seen in patients with relapsing remitting multiple sclerosis (RRMS) relative to healthy controls. There is debate in the literature on the impact of disease subtype on cognition, with recent studies suggesting differences in cognitive abilities as a function of disease subtype. For this review, we were primarily interested in studies that specifically examined the cognitive performance of RRMS patients.

Design/Methods: Studies from 1983 to July, 2007 were included in the current review yielding a total of 769 effect sizes. The aggregated or mean effect size was computed using a random effects model and adjusted for sample size (Hedges adjusted g) using Comprehensive Meta-Analysis, Version 2.0. (Borenstein, 2005).

Results: Results suggest that there is moderate decline in cognitive functioning in patients relative to healthy controls. Largest effect sizes were found for domains of motor functioning, mood and psychological status and memory and learning. In addition, we found that several demographic and clinical variables influenced cognitive performance within the MS sample. Of these age and gender were found to influence all cognitive domains, whereas neurological disability and disease duration were primarily associated with deficits on tasks assessing memory and learning.

Conclusion/Discussion: This meta-analysis suggests that MS is associated with a global decline in cognitive functioning. Deficits were seen across tasks and across cognitive domains.

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