J. ALLEN, L. SAMSON, & M. CECIL. Executive Function Deficits and Adaptive Functioning in Parkinson’s Disease.

The current study sought to clarify the relationship between adaptive functioning (activities of daily living) and executive control deficits in a sample of individuals with Parkinson’s Disease. The current study included 55 individuals (26 with Parkinson’s disease, and 29 healthy elderly controls) recruited through a support group for Parkinson’s disease located in a moderately-sized city in the Midwest of the USA. The total sample included 31 women and 24 males with a mean age of 70 years. All participants in the study received a battery of neuropsychological measures that included a number of executive control tasks (Wisconsin Card Sorting Test, Stroop Color-Word Test, etc.) as well as measures of adaptive functioning (Adult Functioning and Adaptive Behavior Scale; Community Integration Questionnaire, etc.). Along with comparing the overall level of performance of the control and Parkinson’s groups on the executive control measures, correlational analysis was used to determine the relationship between executive control measures and adaptive abilities in both the control and Parkinson’s groups. The color-word T-score of the Stroop (t = 3.36, p < .001) and the number of categories achieved from the Wisconsin Card Sorting Test (t = 2.20, p < .033) appeared to represent the largest group differences in performance. A number of significant relationships between executive functioning and adaptive abilities emerged for the Parkinson’s group. For example, the Color-Word score from the Stroop was significantly correlated with both the AFAQS (r = .74, p < .001) and the CIQ (r = .46, p < .05). Additional findings of interest will be discussed and related to issues of clinical relevance.

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Background: Phonology is a factor of major importance in reading acquisition. As demonstrated by Morais and colleagues, phonemic awareness does not emerge naturally from other kinds of phonological awareness. It arises from acquisitions of the alphabetic code. A phonological deficit is revealed by low scores on phonological awareness tasks and impairment on working memory tasks, like digit span. Objectives: to delineate the performance pattern on phonological tasks in Portuguese children and to analyse correlations between different tasks of phonological awareness and digit span. Methods: 171 children 6.5-12.5 years old, from public and private schools, between 1st-6th grades were included. Tasks applied were digit span (WISC), and phonological tasks including omission of the first syllable and phoneme, manipulation of the first syllable and a rhyme judgment test. Results: We’ve found no sex or school differences. Educational level and age had a significant effect on all tasks, although only the former has a main effect on the results. Digit span was a good predictor of the performance on the omission of the first phoneme task and the rhyme judgment test. There was a significant correlation between syllable tasks, and between the syllable manipulation test and rhyme judgment. Discussion: Our results are similar to those found in previous studies, demonstrating a correlation between phonemic tasks and digit span. In Portuguese children the most important factors on phonological awareness tasks are educational level and automaticity of the reading processes.

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S.V. MÜLLER, J. MÖLLER, A. RODRIGUEZ-FORNELLS, & T.F. MÜNTE. Brain Potentials Related to Internal and External Information Used for Performance Monitoring.

A central characteristic of humans is that they have to be able to operate under circumstances where less than optimal information is available. How, then, are actions monitored, if their quality and adequacy is in doubt? This was investigated with a feedback task while recording event-related potentials (ERPs). In a study-phase, subjects had to learn picture-button-associations for 12 different pictures. In the subsequent test-phase, pictures were presented several times in random order and had to be responded to by the appropriate button. One second after the onset of a picture feedback was provided. In most cases, a verbal feedback (negative or affirmative as appropriate) was delivered, in 20% of the trial (equivocal) feedback was presented, leaving the subject in doubt whether or not the response had been appropriate. Time-locked to the erroneous responses, an error-related negativity was obtained, which showed a typical frontocentral distribution and can be taken as an index of the internal self-