

AGE-RELATED CHANGES IN EXECUTIVE CONTROL AND THEIR RELATIONSHIPS WITH ACTIVITY PERFORMANCE

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Background and Aims: Deterioration in the frontal and prefrontal cortex associated with executive functions (EF) that occur with age may influence activity performance, such as handwriting. The study's aim was to describe changes occurring with age in EF and handwriting performance and further analyze the relationships between EF and handwriting performance. Methods: Eighty healthy participants (aged 31 to 76+) living in the community. All participants performed the Behavioral Assessment of the Dysexecutive Syndrome (BADS) and handwriting tasks on a digitizer included in the Computerized Penmanship Evaluation Tool (ComPET), which supplies kinematical measures of the handwriting process. Results: Significant differences were found between age groups for both EF and handwriting measures. Significant correlations were found between EF and temporal and spatial measures of the handwriting process. Conclusions: The result of this study indicates that handwriting process measures may be an effective way of evaluating the decrease in executive functions in the elderly, by means of a functional activity.