WISCONSIN CARD SORTING TEST PERFORMANCE IN A HEALTHY GREEK SAMPLE: RELATIONSHIP TO AGE, SEX AND EDUCATION

Liozidou A 1,2, Sirigonaki K 3, Babili I 4, Zourna C 4, Kroupi C 4, Etairidou G 4, Pavlou G 4, Anifantaki T 4, Makropoulou A 4, Fioranti E 4, Andreakos N 4, Zalonis I 4

1 Neurology Department, Henry Dunant Hospital Center, Athens  
2 Psychology Department, Faculty of Human Sciences, Athens Metropolitan College  
3 Institute of Applied and Computational Mathematics, Foundation for Research and Technology, Crete  
4 Neuropsychological Laboratory, 1st Neurology Department, National and Kapodistrian University of Athens

Abstract

OBJECTIVE: We aimed to investigate the relationship of demographic variables to Wisconsin Card Sorting Test (WCST) performance in a healthy Greek sample.

MATERIAL – METHOD: Data for this study were obtained from the database of the Greek normative study of the WCST. The sample included 360 participants (142 men, 218 women; minimum-maximum age: 16-86 years old; mean age: 44.62 years (SD=16.77); mean educational level: 13.03 years (SD=3.38); handedness: right=93.9%). All scoring dimensions of the WCST were calculated. Descriptive analyses were performed to examine distribution of age within our sample and 4 age groups were formed: 16-29 years (n=92), 30-45 years (n=90), 46-56 years (n=91), 57-86 years (n=87). Multiple regression analyses were performed to assess the influence of age, sex and education on the WCST performance of our sample.

RESULTS: Younger participants performed better than the elderly participants on all scores except for Total Number Correct, while participants with more than 12 years of education outperformed those with equal or less than 12 years of education on % Errors, % Perseverative Responses, % Perseverative Errors, % Conceptual Level Responses, Number of Categories Completed and Learning to Learn. Women scored better than men in one scoring dimension (% Non-Perseverative Errors).

CONCLUSIONS: Our findings are in line with previous studies suggesting the strong relationship of age to WCST performance. Higher education within our sample indicated better WCST performance, while sex had the weakest relationship to WCST performance. WCST scores should be interpreted within the context of Greek patients’ demographic variables.