

Table. Median comparison of the CERAD-MX tasks z-scores between the different APOE+ and APOE- groups.

	Cε4+ (n=7) Median(IQR)	Cε4- (n=38) Median(IQR)	NCε4+ (n=6) Median(IQR)	NCε4- (n=43) Median(IQR)	H, p, η^2_H	<i>post hoc results</i>
Global cognition						
Mini Mental State Examination (MMSE)	0.902 (0.879 - 0.952)	0.277 (-0.573 - 0.902)	0.836 (-0.460 - 0.889)	0.409 (-0.346 - 0.902)	3.09, 0.3787, 0.033	ns
Memory						
Word List - Immediate Recall	1.20 (-0.213 - 1.90)	0.405 (-0.606 - 1.20)	1.37 (0.999 - 1.44)	0.591 (-0.0858 - 1.33)	6.59, 0.0863, 0.071	ns
Word List - Delayed Recall	0.540 (0.0902 - 1.73)	0.176 (-0.689 - 0.745)	1.20 (1.06 - 2.05)	0.615 (-0.141 - 1.13)	12.1, 0.0071, 0.13	Cε4-<NCε4+ (p=0.0078, r=0.484)
Word List - Recognition	0.431 (0.254 - 0.432)	0.428 (0.123 - 0.470)	0.428 (0.381 - 0.607)	0.432 (0.254 - 0.629)	3.73, 0.2917, 0.040	ns
MCT - List 1	0.498 (-0.481 - 0.693)	0.498 (-0.630 - 0.685)	0.604 (0.102 - 0.833)	0.498 (-0.199 - 0.685)	1.13, 0.7707, 0.012	ns
MCT - List 2	-0.876 (-1.26 - -0.239)	-0.275 (-1.42 - 0.910)	0.827 (-0.284 - 1.14)	0.599 (-0.275 - 0.838)	4.66, 0.1984, 0.050	ns
MCT - List 1 & 2	-0.616 (-1.04 - -0.316)	-0.188 (-1.33 - 0.554)	0.591 (-0.0773 - 0.951)	0.148 (-0.514 - 0.580)	7.81, 0.05, 0.084	ns
MCT - Free Recall	0.132 (-0.930 - 0.832)	-0.265 (-0.981 - 0.331)	1.02 (0.225 - 1.48)	0.132 (-0.861 - 0.558)	7.14, 0.0677, 0.077	ns
ROCF - Delayed Recall	-0.218 (-0.448 - 0.565)	-0.170 (-1.23 - 0.964)	0.602 (-0.287 - 0.961)	0.187 (-0.267 - 0.712)	4.68, 0.1968, 0.050	ns
Constructional Praxis - Immediate Recall	0.451 (-0.563 - 1.19)	0.322 (-1.06 - 1.19)	0.0890 (-0.303 - 1.47)	0.451 (0.137 - 1.00)	2.75, 0.4318, 0.029	ns
Language						
Boston Naming Test	0.366 (-0.797 - 0.660)	-0.372 (-1.42 - 0.504)	0.504 (-1.17 - 0.699)	0.142 (-0.792 - 1.02)	5.33, 0.1494, 0.057	ns
Attention and processing speed						
Digits and Symbols	0.533 (-0.184 - 1.91)	0.219 (-0.905 - 0.634)	1.05 (-0.533 - 2.07)	0.247 (-0.756 - 1.13)	4.41, 0.2202, 0.047	ns
Visuospatial abilities						
ROCF - Copy	-0.520 (-0.950 - -0.254)	-0.405 (-1.07 - 0.0799)	-0.479 (-1.46 - 0.155)	-0.138 (-0.803 - 0.372)	4.00, 0.2613, 0.043	ns
Constructional Praxis -	0.760 (-1.22 -	0.179 (-0.686	0.305 (-1.63 -	0.464 (-0.141	0.484, 0.9223,	ns

Copy	1.17)	- 1.07)	0.861)	- 0.954)	5.2×10^{-3}	
Executive functions						
WCST - Categories	0.445 (-0.608 - 0.652)	0.152 (-0.687 - 1.28)	1.37 (0.0331 - 2.04)	0.652 (-0.182 - 1.58)	3.44, 0.3288, 0.037	ns
WCST - perseverations	0.363 (-1.60 - 0.959)	0.0236 (-1.07 - 0.846)	0.746 (0.264 - 1.09)	0.122 (-0.583 - 0.921)	4.10, 0.2512, 0.044	ns

Note. Median (Median) and interquartile range (IQR) are reported for the 16 neuropsychological tests chosen as cognitive measures. Group differences were assessed using the Kruskal–Wallis test and Dunn’s test was used for pairwise comparison

Abbreviations: M, mean; IQR, interquartile; ns, non significant; MMSE, Mini Mental State Examination; MCT, Memory Capacity Test; ROCF, Rey-Osterrieth Complex Figure; WCST, Wisconsin Card Sorting Test; p , p -value; H , Kruskal–Wallis H statistic; η_H^2 Kruskal–Wallis eta squared ($\eta_H^2 = H/[N-1]$); r , effect size for Dunn's post hoc pairwise comparisons, calculated as the standardized test statistic ($r = Z/\sqrt{N}$)

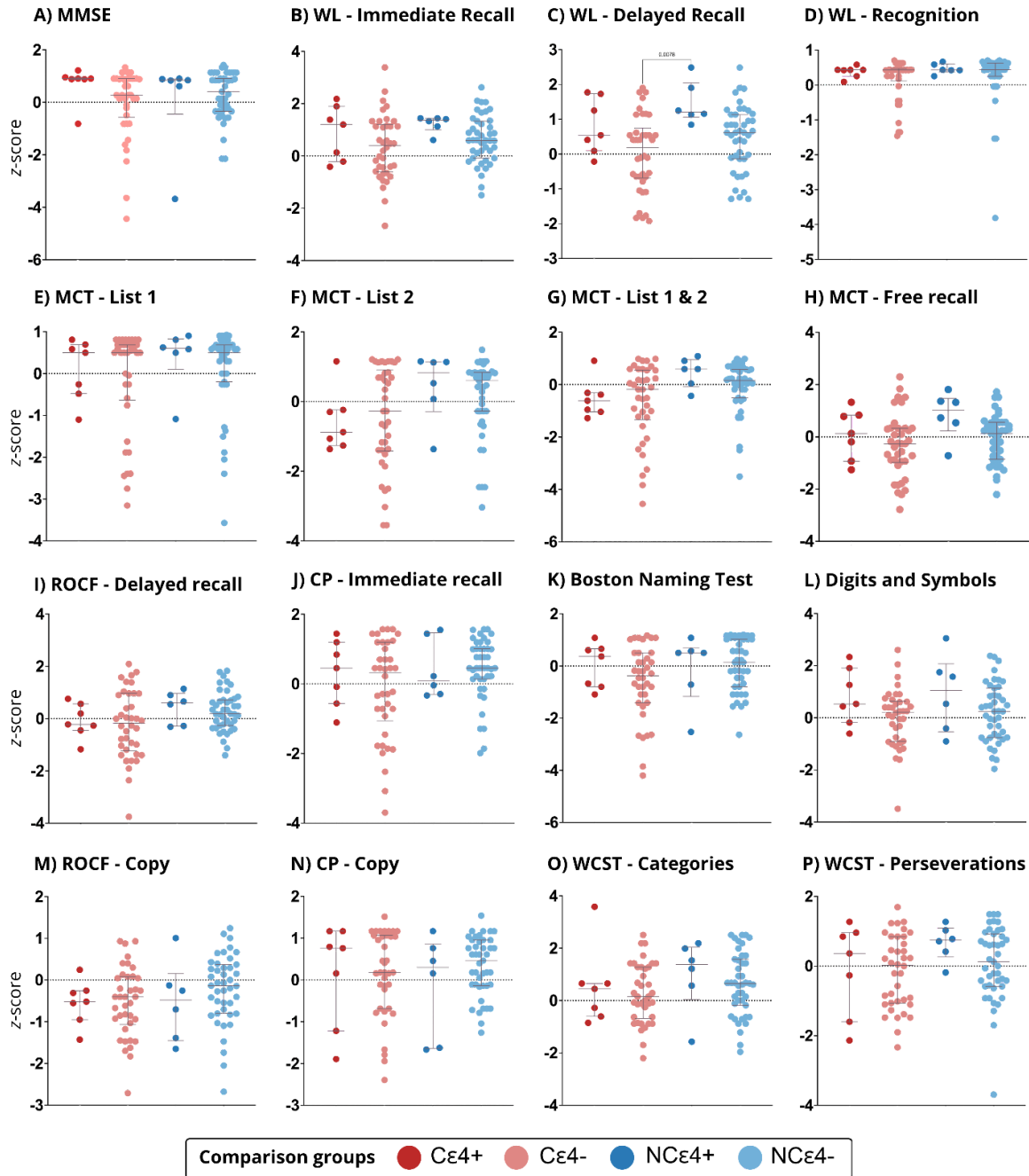


Figure 1. Scatter dot plots showing group comparisons across multiple neuropsychological tests. Carriers are shown in red, and non-carriers in blue. Within each color, darker shades represent ε4+ subgroups and lighter shades represent the ε4- subgroup. For each group, central lines represent the median, and error bars denote the interquartile range.

Abbreviations: MMSE, Mini Mental State Examination; MCT, Memory Capacity Test; ROCF, Rey-Osterrieth Complex Figure; WCST, Wisconsin Card Sorting Test; WL, Word List; CP, Constructional Praxis; * $p < 0.05$.