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A pilot examination of the validity of stylus and finger drawing on visuomotor-mediated tests on ACEmobile

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Table 1: Demographics Information of the AD and Control Groups

	Control (n = 23)	AD (n = 26)	Test Statistic
Age (y) – n, mean (SD) [min, max]	22, 71.7 (5.9) [60.9, 80.7]	26, 76.3 (6.7) [62.2, 89.1]	2.49 (p=0.016)
Gender, male	12 (52.0)	18 (69.2)	1.50 (p=0.22)
Dominant hand, right	21 (95.5)	18 (85.7)	1.21 (p=0.27)
Tablet experience – n, median (IQR) [min, max]	23, 3 (1, 8) [1, 10]	26, 1 (1, 4) [1, 10]	0.92 (p=0.36)
Degree, yes	7 (30.4)	11 (42.3)	0.74 (p=0.39)
ACE-III total score – n, median (IQR) [min, max]	23, 96 (91, 98) [79, 100]	26, 73.5 (59, 80) [37, 90]	5.56 (p<0.001)
Estimated FSIQ – n, mean (SD), [min, max]	23, 109.5 (10.75), [83.4, 122.5]	26, 110.3 (9.4), [88.3, 122.5]	0.28 (p=0.78)

Age, FSIQ – t-test

Gender, dominant hand, degree – chi-squared

Tablet experience, ACE-III total – Mann Whitney U

Table 2**Statistical Comparison between Methods of Test Administration**

	Mean	Median	SD	<i>r</i> (<i>p</i>)	Z	<i>p</i>
Pencil vs Stylus (n=39)						
Pencil	8.07	8	1.8	0.62	-0.96	0.34
Stylus	7.67	9	2.8	(<0.001)		
Pencil vs Finger (n=44)						
Pencil	8.14	8	1.84	0.55	-2.02	0.044
Finger	7.50	8	2.32	(<0.001)		

SD = standard deviation, *r* = correlation coefficient, Z = Wilcoxon signed rank test

Table 3**Performance of the stylus and finger against pencil - n (%)**

Test	Method	Matched Scores	Pencil performed worse	Pencil performed better
Infinity loop	Stylus (n = 40)	34 (85.0)	3 (7.5)	3 (7.5)
	Finger (n = 47)	38 (80.9)	3 (6.4)	6 (12.8)
Cube	Stylus (n = 40)	26 (65.0)	6 (15.0)	8 (20.0)
	Finger (n = 47)	31 (66.0)	4 (8.5)	12 (25.5)
Clock	Stylus (n = 40)	24 (60.0)	4 (10.0)	12 (30.0)
	Finger (n = 45)	26 (57.8)	5 (11.1)	14 (31.1)
Sentence writing	Stylus (n = 40)	21 (52.5)	10 (25.0)	9 (22.5)
	Finger (n = 45)	16 (35.6)	12 (26.7)	17 (37.8)