

2023-08-24

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

Noad, R

<https://pearl.plymouth.ac.uk/handle/10026.1/21673>

10.1080/13803395.2023.2249167

Journal of Clinical and Experimental Neuropsychology

Taylor and Francis Group

All content in PEARL is protected by copyright law. Author manuscripts are made available in accordance with publisher policies. Please cite only the published version using the details provided on the item record or document. In the absence of an open licence (e.g. Creative Commons), permissions for further reuse of content should be sought from the publisher or author.

Supplementary Analyses

Frequency distribution of scores (%)

Subtest	Score	Control			AD		
		Pencil	Stylus	Finger	Pencil	Stylus	Finger
Infinity Loop	0	4	5	9	23	19	28
	1	96	95	91	77	81	72
Cube	0	4	0	9	15	24	28
	1	13	11	14	23	29	28
	2	83	89	77	62	48	44
Clock Drawing	0	0	0	0	0	5	0
	1	0	0	0	4	5	8
	2	0	0	0	19	29	4
	3	4	11	5	15	5	38
	4	9	5	29	23	29	21
	5	87	84	67	39	29	29
Sentence Writing	0	9	0	14	38	38	29
	1	22	42	48	38	24	42
	2	70	58	38	23	38	29

Sensitivity, specificity and area under the curve for infinity loop, cube and clock with 95% confidence intervals (CI)

Test	Method	Cut off	Sensitivity (%)	Specificity (%)	AUC
Infinity loop	Pencil (n = 49)	0	23.1 [9.0, 43.7]	95.7 [78.1, 99.9]	0.594 [0.501, 0.687]
	Stylus (n = 40)	0	19.1 [5.5, 41.9]	94.7 [74.0, 99.9]	0.569 [0.469, 0.669]
	Finger (n = 47)	0	28.0 [12.1, 49.4]	90.9 [70.8, 98.9]	0.595 [0.486, 0.703]
Cube	Pencil (n = 49)	≤ 1	38.5 [20.2, 59.4]	82.6 [61.2, 95.1]	0.610 [0.486, 0.734]
	Stylus (n = 40)	≤ 1	52.4 [29.8, 74.3]	89.5 [66.9, 98.7]	0.722 [0.595, 0.849]
	Finger (n = 47)	≤ 1	56.0 [34.9, 75.6]	77.3 [54.6, 92.2]	0.673 [0.536, 0.809]
Clock	Pencil (n = 49)	≤ 2	23.1 [9.0, 43.7]	100.0 [85.2, 100.0]	0.759 [0.644, 0.874]
	Stylus (n = 40)	≤ 2	38.1 [18.11, 61.6]	100.0 [82.4, 100.0]	0.795 [0.668, 0.921]
	Finger (n = 45)	≤ 2	12.5 [2.7, 32.4]	100.0 [83.9, 100.0]	0.757 [0.625, 0.889]
Sentence Writing	Pencil (n = 49)	≤ 1	69.6 [47.1, 86.8]	76.9 [56.4, 91.0]	0.758 [0.629, 0.886]
	Stylus (n = 40)	≤ 1	57.9 [33.5, 79.8]	61.9 [38.4, 81.9]	0.679 [0.524, 0.835]
	Finger (n = 45)	≤ 1	38.1 [18.1, 61.6]	70.8 [48.9, 87.4]	0.584 [0.427, 0.741]