

PDCogniCare

Montreal Cognitive Assessment

MoCA

		
Copyright Status	Domain Assessed	Administration Time
Free	Global Cognition	20 Minutes

Description

The Montreal Cognitive Assessment (MoCA) is a brief 10-minute screening tool for cognitive impairment that assesses visuospatial, executive function, naming, memory, attention, and language domains.¹⁶ The Movement Disorder Society (MDS) endorses use of the MoCA to screen for cognitive impairment in PD.⁴

Training and Administration

There is a one-hour training module and certification available through [MoCA Cognition](#). Successful completion of this module is required to administer any MoCA test. This program is free for students, faculty members, academic researchers, and publicly operated healthcare institutions.

Scoring

The test is scored out of 30. Higher points reflect better overall cognitive functioning, with a score below 26 being indicative of PD-MCI, and a score below 23 indicative of dementia in PD.^{17, 18} An additional point (+1) is added to the total score for those with less than 12 years education or who are illiterate.



Validated in PD



Validated for
telehealth



Alternative versions
available

Alternative Versions

There are three validated versions of the MoCA available to decrease practice effects for repeat administration (versions 8.1, 8.2, and 8.3). There are adapted versions available for people with visual (MoCA Blind) and hearing (MoCA Hearing Impaired) impairments, and for telephone and telehealth administration (MoCA Audiovisual). The Mini MoCA is available for brief (5 minute) administration and MoCA Duo is an available app version.¹⁹



MoCA Blind



MoCA Hearing
Impaired



Mini MoCA/
MoCA Duo

PD considerations

While performance on the MoCA is mostly independent of motor function, the visuospatial items require a written response. Micrographia, or small cramped handwriting, is a common motor symptom of PD that can interfere with performance in written tasks.²⁰ For people with micrographia or severe motor impairments in PD, administration of the MoCA Blind should be considered as items with motor components are removed.



Telehealth

The MoCA has demonstrated excellent reliability for direct-to-home videoconference administration in older adults with Alzheimer's disease.²¹ When completed via phone call or videoconferencing, the MoCA-BLIND has also been shown to demonstrate comparable reliability to in-person administration within a large cohort of older adults with or without cognitive impairment.²²

Psychometric and Normative Data

Normative data across age and education level is shown in Table 1.²³

Table 1 MoCA normative data from the Alzheimer’s Disease Neuroimaging Initiative (ADNI) database.

Age group	Years of education							
	<12		12		> 12		Total by age	
	n	Mean (SD)	n	Mean (SD)	n	Mean (SD)	n	Mean (SD)
50 – 60	62	19.94 (4.34)	172	22.25 (3.46)	424	24.34 (3.38)	659	23.37 (3.78)
55 – 65	60	19.60 (4.14)	143	21.58 (3.93)	369	24.43 (3.31)	573	23.20 (3.96)
60 – 70	57	19.30 (3.79)	113	20.89 (4.50)	246	24.32 (3.04)	418	22.69 (4.12)
65 – 75	38	18.37 (3.87)	67	20.57 (4.79)	122	24.00 (3.35)	228	22.05 (4.48)
70 – 80	14	16.07 (3.17)	23	20.35 (4.91)	42	23.60 (3.47)	79	21.32 (4.78)

Psychometric data for the MoCA is shown in Table 2.

Table 2 MoCA psychometric data

Population	Cutoff	Sens (%)	Spec (%)	PPV(%)	NPV (%)	AUC (95%CI)	ICC (95% CI)
PD-MCI	26/27 ^{17, 18}	90 ¹⁸	75	61	95	0.90 (0.82-0.95)	0.79 (0.36–1.2) ²⁴
PDD	23/24 ^{17, 18}	95 ¹⁸	87	76	98	0.97 (0.92-0.99)	