

**Table 1.** List and Meaning of Kinematic Parameters for Unified Parkinson's Disease Rating Scale (UPDRS) tasks.

<b>Task</b>	<b>Name</b>	<b>Meaning</b>	<b>Unit</b>
FT	MO <sub>m</sub>	Mean of Maximum Opening <sup>2</sup>	mm
	MO <sub>v</sub>	Variability <sup>1</sup> of Maximum Opening	-
	MOS <sub>m</sub>	Mean of Maximum Speed (opening phase)	mm/s
	MOS <sub>v</sub>	Variability <sup>1</sup> of Maximum Speed (opening phase)	-
	MCS <sub>m</sub>	Mean of Maximum Speed (closing phase)	mm/s
	MCS <sub>v</sub>	Variability <sup>1</sup> of Maximum Speed (closing phase)	-
	MA <sub>m</sub>	Mean of Movement Amplitude <sup>2</sup>	mm
	MA <sub>v</sub>	Variability <sup>1</sup> of Movement Amplitude	-
	Freq	Principal Frequency in voluntary movement band	Hz
	D <sub>v</sub>	Variability <sup>1</sup> of Movement Duration	-
CO	MOS <sub>m</sub>	Mean of Maximum Speed (opening phase)	mm/s
	MOS <sub>v</sub>	Variability <sup>1</sup> of Maximum Speed (opening phase)	-
	MCS <sub>m</sub>	Mean of Maximum Speed (closing phase)	mm/s
	MCS <sub>v</sub>	Variability <sup>1</sup> of Maximum Speed (closing phase)	-
	MA <sub>m</sub>	Mean of Movement Amplitude	mm
	MA <sub>v</sub>	Variability <sup>1</sup> of Movement Amplitude	-
		D <sub>m</sub>	Mean of Movement Duration
	D <sub>v</sub>	Variability <sup>1</sup> of Movement Duration	-
PS	MR <sub>m</sub>	Mean of Movement Rotation	deg
	MR <sub>v</sub>	Variability <sup>1</sup> of Movement Rotation	-
	MSS <sub>m</sub>	Mean of Maximum Speed (supination phase)	deg/s
	MSS <sub>v</sub>	Variability <sup>1</sup> of Maximum Speed (supination phase)	-
	MPS <sub>m</sub>	Mean of Maximum Speed (pronation phase)	deg/s
	MPS <sub>v</sub>	Variability <sup>1</sup> of Maximum Speed (pronation phase)	-
		Freq	Principal Frequency in voluntary movement band
	DP <sub>v</sub>	Variability <sup>1</sup> of Pronation Duration	-
LA	Θ <sub>m</sub>	Mean of Angular Amplitude	deg
	Ω <sub>m</sub>	Mean of Angular Speed	deg/s
	P <sub>m</sub>	Mean of Pause	s
	R <sub>m</sub>	Mean of Regularity	s
	F	Repetition Frequency	Hz
	P <sub>XΘ</sub>	Thigh Inclination Spectrum Power	-
	P <sub>XΩ</sub>	Thigh Angular Speed Spectrum Power	-
S2S	T	Total Duration	s
	T <sub>f</sub>	Forwards Bending Duration	s
	T <sub>b</sub>	Backwards Bending Duration	s
	D <sub>t</sub>	Forwards/Backwards Duration Difference	s
	Θ	Average Bending Amplitude	deg
	Ω	Average Bending Speed	deg/s
G	GCT <sub>m</sub>	Mean of Gait Cycle Time	s
	Limp	Limp	% of GCT
	SL	Stride Length	% of height
	StepV <sub>m</sub>	Mean of Step Speed	% of height/s
	C	Cadence	steps/min
	RStep	Step Regularity	-
	S	Symmetry	-
	ThighRoR <sub>m</sub>	Mean of Thigh Range of Rotation	deg

PSum	Total Spectrum Power	-
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<sup>1</sup>: Variability is equivalent to the coefficient of variation CV, defined as the ratio of the standard deviation  $\sigma$  to the mean  $\mu$ .

<sup>2</sup>: MOm indicates the maximum peak of fingers amplitude during the opening phase of the movement. MAm indicates the maximum excursion of the fingers (difference between maximum peak and minimum point in the same movement). MOm allows us to highlight anomalies during the opening phase; MAm anomalies during the closing phase.

**Table 2.** Items of the post-study system usability questionnaire (PSSUQ)<sup>1</sup>.

Item #	Question
1.	Overall, I am satisfied with how easy it is to use the system
2.	It was simple to use the system
3.	I could effectively complete the tasks using the system
4.	I was able to complete the tasks quickly using the system
5.	I was able to efficiently complete the tasks using the system
6.	I felt comfortable using the system <sup>2</sup>
7.	It was easy to learn to use the system <sup>2</sup>
8.	I believe I could become efficient quickly using the system
9.	The system gave error messages that clearly told me how to recover
10.	Whenever I made a mistake using the system, I could recover easily and quickly
11.	The information provided by the system was clear
12.	It was easy to find the information I needed
13.	The information provided for the system was easy to understand
14.	The information was effective in helping me to complete the tasks
15.	The organization of information on the screen was clear
16.	The interface of this system was pleasant <sup>2</sup>
17.	I liked using the interface of the system <sup>2</sup>
18.	The system has all the functions I expected it to have
19.	Overall, I am satisfied with the system

<sup>1</sup>: Items were presented in Italian to Parkinson's disease (PD) participants. They have been translated only for publication readability. <sup>2</sup>: Items were also presented separately for the two subsystems (for upper and lower limbs).