

Traditional Versus Computerized Finger Tapping in Patients with Parkinson's Disease

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Objective: The purpose of this study was to compare the CNS Vital Signs computerized finger tapping speed with the traditional Finger Tapping Test in patients with Parkinson's disease (PD). It was hypothesized that the participants would be faster on the computer due to having less strict tapping criteria and no administration monitoring, thereby allowing the PD patients to compensate somewhat for their motor disturbances.

Methods: Participants were 33 outpatients with probable or definite PD. The sample was 67% males, their average age was 63.9 (SD $\frac{1}{4}$ 9.8) years, and their average education was 16.1 (SD $\frac{1}{4}$ 3.7) years. They had been diagnosed with PD 7.5 years prior (SD $\frac{1}{4}$ 5.7, range $\frac{1}{4}$ 1–26). Mean Unified Parkinson's Disease Rating Scale motor scores (part III; on-medication) and Modified Hoehn and Yahr Scale scores were 14.1 (SD $\frac{1}{4}$ 6.9) and 2.1 (SD $\frac{1}{4}$.5), respectively.

Results: Participants tapped faster on the computer with their right (p , .002, Cohen's d $\frac{1}{4}$.66) and left (p , .001, d $\frac{1}{4}$ 1.03) hands. The differences between computerized and traditional tapping attenuated when comparing normative scores (right hand, p , .30, d $\frac{1}{4}$.22; left hand, p , .001, d $\frac{1}{4}$.60). The percentages of patients with scores below the 10th percentile were 33.3% and 39.4% for the right- and left-hand traditional tapping, and 24.2% and 27.3% for the computerized tapping.

Conclusions: Patients with PD were able to tap faster on the computer than on the traditional finger tapper. The differences attenuated, but did not disappear, when comparing normative scores.

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