Abstract

Objective: To evaluate the effects of different instructions for the assessment of maximum walking speed during the ten-meter walking test with chronic stroke subjects. Methods: Participants were instructed to walk under four experimental conditions: (1) comfortable speed, (2) maximum speed (simple verbal command), (3) maximum speed (modified verbal command “catch a bus”) and (4) maximum speed (verbal command + demonstration). Participants walked three times in each condition and the mean time to cover the intermediate 10 meters of a 14-meter corridor was registered to calculate the gait speed (m/s). Repeated-measures ANOVAs, followed by planned contrasts, were employed to investigate differences between the conditions (¿=5%). Means, standard deviations and 95% confidence intervals (CI) were calculated. Results: The mean values for the four conditions were: (1) 0.74 m/s; (2) 0.85 m/s; (3) 0.93 m/s; (4) 0.92 m/s, respectively, with significant differences between the conditions (F=40.9; p<0.001). Comfortable speed was significantly slower than the maximum speed, indicating that the participants were able to increase speeds when required. Significant differences were observed between the second condition with the third (p=0.002; 95%CI=-0.13 to -0.03) and the fourth conditions (p=0.004; 95%CI=-0.12 to -0.02) with no differences between the third and fourth conditions (p=1.00; 95%CI=-0.04 to 0.05). Conclusions: The results indicated that simple verbal commands were not sufficient to capture maximum gait speed with chronic stroke subjects. Thus, for clinical assessments and research purposes, where measurements of the maximum gait speed are necessary, modified verbal commands or demonstration strategies could be employed by physical therapists to ensure accurate information.

Keywords

Mobility, stroke, verbal reinforcement, physical therapy.