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INFLUENCE OF AUDITORY STIMULI DURING GAIT IN PARKINSON'S DISEASE PATIENTS

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Introduction: Parkinson's disease (PD) is an idiopathic, progressive, degenerative disease which affects the central nervous system leading to several motor alterations. Among them, gait disorders are the most disabling symptoms of this disease. **Objective:** This study aimed to demonstrate the relationship between auditory stimuli and gait quality in PD compared to healthy participants. **Methods:** A quantitative study was carried out. The sample consisted on 23 participants (male and female), distributed in Parkinson's Disease Group (GDP n=11), and a group with healthy participants (GSDP n=12). The GDP was submitted to the Hoehn and Yahr modified scale and to the Unified Parkinson's Disease Rating Scale (UPDRS) and a questionnaire to identify the diagnosis period and the time of the last medication. Both groups were submitted to the procedure of strolling for one minute on a straight line in order to determine the distance covered, the gait cadence and displacement speed. The same procedure was repeated with an auditory stimuli paced by a metronome configured 10% below the normal cadence of each participant. **Results:** The gait cadence variation with and without the stimuli was significant for both groups ($p < 0,001$). On GDP there was no significant difference between the distance ($p = 0,509$) and the gait speed ($p = 0,488$) with and without the auditive stimuli. The GDP showed no differences ($p > 0,005$) for distance, speed and cadence in relation to disease staging, motor score, diagnosis period and the time of the last medication. **Conclusion:** The present study shows that the auditory stimuli significantly influence the gait cadence of PD participants and positively influence the gait distance and speed. Therefore, PD participants with auditory stimuli may have similar gait pattern when compared to healthy counterparts and the influence of auditory stimuli is independent to disease staging, the motor score, diagnosis period and the time of the last medication.

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