

A Study to Compare the Effects of Auditory Cues and Visual Cues on Balance and Functional Mobility In Patients with Parkinson's Disease

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ABSTRACT

Introduction: Parkinson disease (PD) is a most common neurological degenerative, progressive disorder, affecting about 1% of total population over age of 60 and roughly 4% of population over the age of in industrialized countries. The balance disturbances of Parkinson's disease (PD) are progressive and limit the functional independence of the patients, thus affecting their quality of life.

Methodology: 30 Patients diagnosed with Parkinson's disease, aging between 40 to 80 years having MMSE score > 24 and Hoehn-Yahr scale score in between 3-4 were selected for the study. Timed Up and Go Test (TUG), Cadence measurement and Berg Balance Scale (BBS) were used as an outcome measures. Two groups of 15 patients were made. Patients were treated during "ON" period of medications. **Group A** was trained for balance and gait by using visual cues in the form of visual feedback and **Group B** was trained with auditory cues with the help of instrumental music. This training was given for 3 days a week for 4 weeks to both the groups.

Results: Between the groups comparison showed that there is no significant improvement in the mean values of TUG scores with p values of 0.715 and 0.902 for group A & B respectively. Cadence measurement showed p value of 1.000 for group A and 0.935 for group B. Also, group A and B were found to have a similar p value of 1.000 on comparing BBS scores.

Conclusion: This study concludes that external cueing has shown statistically significant improvement in overall outcome measures of TUG scores, Cadence measurement and BBS scores when compared within the groups. But there was no statistically significant difference seen in the scores of all outcome measures when compared between the groups, suggesting both strategies are equally effective in improving balance and functional mobility training in Parkinson's disease patients.

Keywords: Parkinson's disease, Balance, Visual cues

