

## Effects of the Neurodevelopmental Treatment (NDT-Bobath) in the Mobility of Adults with Neurological Disorders

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### ABSTRACT

**Background:** Bobath method was initially applied in adults and then in children with cerebral palsy. Studies conducted in recent years have shown that the NDT-Bobath method improves function and mobility among persons with Multiple Sclerosis (MS) and Hemiplegia.

**Purpose:** The purpose of the present study was to investigate the effect of NDT-Bobath method in the mobility of patients with neurological disorders (hemiplegia, multiple sclerosis), as evaluated using the TUG, BBS, TMT, and MAS tests.

**Methods:** The study included 20 persons with neurological disorders (11 persons with multiple sclerosis and 9 persons with hemiplegia). The mean age of the participants was  $38.7 \pm 13.9$  years and mean body mass was  $65.1 \pm 13.1$  kg. The participants in the two groups Low Frequency (LF) and High Frequency (HF) followed two different intervention Bobath-NDT programs in terms of frequency. For the statistical analysis a two-way repeated measures analysis of variance (ANOVA) was performed.

**Results:** Bobath-NDT method improves both mobility and functionality of patients with neurological disorders (BBS,  $p = 0.095$  and Tinetti test,  $p = 0.099$ ) but did not improve spasticity according to the results of MAS scale,  $p = 0.095$ .

**Conclusions:** Overall, the results of the present investigation provided considerable evidence suggesting that Bobath- NDT method improves mobility according to the tests (BBS, TMT), but did not improve spasticity according to the results of MAS scale. Therefore, it was concluded that Bobath-NDT method improves both mobility and functionality of patients with neurological disorders. More research will have to be done in the future.

**Keywords:** Bobath, NDT, BBS, TMT, MAS, Hemiplegia, MS

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