



## Effects of Balance Training and Stabilisation Exercises on Static and Dynamic Balance in Individuals With Tension-Type Headache

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**Background and Aim.** Tension-type headache (TTH) is one of the most prevalent neurological disorders and is often associated with muscular tension, postural alterations, and impaired postural control. However, its relationship with static and dynamic balance remains insufficiently investigated. This study aimed to evaluate the effects of balance and stabilisation exercises on static (SB) and dynamic balance (DB) in individuals with TTH.

**Methods.** Thirty participants were assigned to an intervention group ( $n = 15$ ) and a control group ( $n = 15$ ). SB was assessed using the Balance Error Scoring System (BESS) and the ABILI Balance System (Stability Index), while DB was evaluated using the Y-Balance Test (YBT), normalised to limb length. Pain intensity was measured using the Visual Analogue Scale, and health-related quality of life was assessed using the SF-36 Questionnaire. Intervention lasted four weeks. As most variables were non-normally distributed, non-parametric tests were applied ( $p < 0.05$ ).

**Results.** No significant baseline differences were found between groups ( $p > 0.05$ ). After the intervention, the experimental group showed significant improvements in DB (YBT,  $p < 0.01$ ), reduced BESS errors ( $p = 0.012$ ), and improved Stability Index values ( $p < 0.05$ ). Pain intensity decreased significantly ( $p = 0.018$ ), and physical health scores improved ( $p < 0.05$ ). No significant changes were observed in the control group. Post-intervention comparisons revealed significant differences between groups ( $p < 0.05$ ).

**Conclusions.** Balance exercises improved static and dynamic balance and reduced pain intensity in individuals with TTH. These findings support the inclusion of targeted balance training in physiotherapy management of TTH.

**Keywords:** Tension-type headache; balance training; stability index; physiotherapy

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