



Assessment and Comparison of Static and Dynamic Balance in Children with Partial Visual Impairment – A Case Control Study

Snehal Dilip Vaidya, Avani Thar and Albin Jerome

Abstract

Aim: Vision provides essential spatial cues for maintaining balance and posture. This study compares static and dynamic balance in children with partial visual impairment and those with normal vision using the Pediatric Berg Balance Scale (PBS) and Functional Reach Test (FRT). The results help identify balance deficits and guide interventions to enhance stability. **Materials and Methods:** A total of seventy-two children aged 5–15 years were selected through purposive sampling and divided into two groups. The study group included children with partial visual impairment, while the control group consisted of children with normal vision. Their static and dynamic balance were evaluated using the Pediatric Balance Scale and the Functional Reach Test. **Results:** The mean PBS score was significantly lower ($p < 0.001$) in the visually impaired group, indicating reduced static balance associated with vision loss. The mean FRT score was also lower in this group, reflecting decreased dynamic balance; however, this difference was not statistically significant ($p = 0.051$). These findings suggest a trend toward impaired dynamic stability among children with visual impairment. **Conclusion:** The study revealed that children with partial visual impairment demonstrated significantly reduced static balance compared to those with normal vision. Although dynamic balance also showed a decreasing trend, the difference was not statistically significant. Overall, visual impairment was found to have an adverse effect on postural stability.

Snehal Dilip Vaidya

Intern

St. Andrew's College of Physiotherapy,
Manjari Phata, Hadapsar, Pune (Maharashtra) India
Email: snehalv2710@gmail.com

Avani Thar

Assistant Professor

St. Andrew's College of Physiotherapy,
Manjari Phata, Hadapsar, Pune (Maharashtra) India

Albin Jerome

Principal

St. Andrew's College of Physiotherapy,
Manjari Phata, Hadapsar, Pune (Maharashtra) India

Key words: Partial Visual Impairment, Static Balance, Dynamic Balance, Pediatric Balance Scale, Functional Reach Test

DOI: 10.18376/jesp/2025/v21/i2/47760