

A Comparative Study on the Predictive Value of Visual-motor Skills in Written Performance in Children With and Without Handwriting Difficulties

RACHNEET KAUR¹, SHIVANI KUNDLIA²

ABSTRACT

Introduction: Handwriting is a primary skill needing visual perception, control, and motor execution. Lack of proper visual-motor integration leads to illegible handwriting, slower writing rate, and lower writing performance in kids.

Aim: To study the significance of visual-motor skills in relation to the writing performance of children with and without handwriting difficulties.

Materials and Methods: A quantitative, cross-sectional comparative and correlational study was done with 100 children aged between 4-10 years who had been screened from a sample of 115. Participants were divided into handwriting difficulty and no handwriting difficulty groups by the Screener of Handwriting Proficiency. Visual-motor skills of the sample were evaluated by the Test of Visual-Motor Skills- Third Edition. The collected data was analysed descriptively, tested for normality, and an independent samples t-test test was conducted wherever appropriate. A Pearson/Spearman correlation was done followed by a binary logistic regression analysis with significance set at $p < 0.05$.

Results: Participants without handwriting difficulties scored higher in TVMS-3 (mean 102.26, SD 5.32) as compared to children with handwriting difficulties (mean 72.04, SD 7.84). The difference in mean of 30.22 was statistically significant ($p=0.000$). A strong positive correlation ($r=0.805$) was found between the SHP and TVMS-3 scores suggesting that higher visual-motor scores correlated to higher writing scores. Logistic regression indicated that TVMS-3 scores were significant in the prediction of handwriting difficulty status, although the stability of the model and classification of difficulty group needed improvement.

Conclusion: Visual-motor skills help in early identification of handwriting difficulty and the association suggests an intervention and assessment for continued visual-motor performance in order to enhance written performance.

Keywords: Child, Handwriting, Learning disabilities, Motor skills, Psychomotor performance, Visual perception.

PARTICULARS OF CONTRIBUTORS:

1. MOT Student, Department of Occupational Therapy, Amity Institute of Health Allied Sciences (AIHAS), Amity University, Noida, Uttar Pradesh, India.
2. Teaching Associate, Department of Occupational Therapy, Amity Institute of Health Allied Sciences (AIHAS), Amity University, Noida, Uttar Pradesh, India.

NAME, ADDRESS, E-MAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Shivani Kundlia (OT),
Teaching Associate, Department of Occupational Therapy, Amity Institute of Health Allied Sciences (AIHAS), Amity University, Sector-125, Noida, Uttar Pradesh, India.
Email: skundlia@amity.edu