

INFLUENCE OF HAPTIC PERCEPTION ON HANDWRITING LEGIBILITY AND SPEED IN TAIWANESE CHILDREN AGES 6 TO 7 YEARS

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Introduction

Occupational therapy practitioners who work with children with handwriting difficulties need to understand the role of haptic perception in children's handwriting. Theoretically, haptic perception is essential for efficient grasp and manipulation of a pencil. Although practitioners believe that there is a relationship between haptic perception and handwriting, little research has been done to examine this relationship. Furthermore, haptic perception's influence on handwriting legibility and speed has not been investigated in Chinese school-age children. An understanding of the contribution of haptic perception to handwriting will provide practitioners with the basic scientific knowledge to support their interventions.

Objectives

This study investigates the contribution of haptic perception to handwriting legibility and speed in typically developing children in Taiwan.

Methods

Sixty-five typically developing children in Taiwan between 6 and 7 years of age will be recruited in this study. Haptic perception will be measured using the Tactile Performance Test (TPT), and handwriting legibility and speed will be measured by the Minnesota Handwriting Assessment (MHA). Visual-motor integration, fine motor coordination, and mental processing speed will be measured using the Grooved Pegboard Test (GPT) and the Coding Subtest of the Wechsler Intelligence Scale for Children-IV and will serve as covariates. Correlations will be employed to examine the relationship between haptic perception and handwriting legibility and speed. Multiple regression analyses will be used to examine the contribution of haptic perception to handwriting legibility and speed.

Results

The data is currently being collected and will be completed by November 2009. Results of the analyses will be presented including correlations and regressions.

Conclusion

Conclusions will be based on the data. It is hypothesized that children with greater haptic perception will show greater handwriting legibility and speed.

Contribution to the practice/evidence base of occupational therapy

From a theoretical viewpoint, there is a need to expand the present understanding of the influence of haptic perception on children's handwriting. From a practical perspective, there is a need to develop standard guidelines to update and justify current conventional rules of practice, in order to assist clinicians in determining when and how to intervene in children's handwriting problems.