UNIVERSITI TEKNOLOGI MARA

VISUAL PERCEPTION SKILLS AND HANDWRITING PERFORMANCE AMONG CHILDREN WITH AUTISM AND TYPICALLY DEVELOPED CHILDREN

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of the requirements for the degree of
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AUTHOR'S DECLARATION

I declare that the work in this disertation was carried out in accordance with the regulations of Universiti Teknologi MARA. It is original and is the results of my own work, unless otherwise indicated or acknowledged as referenced work. This thesis has not been submitted to any other academic institution or non-academic institution for any degree or qualification.

I, hereby, acknowledge that I have been supplied with the Academic Rules and Regulations for Post Graduate, Universiti Teknologi MARA, regulating the conduct of my study and research.
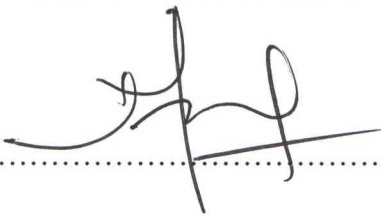
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ABSTRACT

Autism spectrum disorders (ASD) are neurodevelopmental disorders which associated with a high prevalence of fine motor difficulties and executive function impairments that contribute to acquisition and performance of skilled motor tasks (Jasmin et al., 2009). The current evidence implicates impairments in fine motor control and visual-motor integration as likely contributors to handwriting difficulties in children with ASD (Hellinckx, Roeyers, & Van Waelvelde, 2013). The objectives of this study are: (i) to identify the relationship between demographic characteristic and handwriting performance among children with autism and typically developed children; (ii) to identify the relationship between visual perception and handwriting performance among children with autism and; (iii) to identify the relationship between visual perception and handwriting performance among typically developed children. This study is a cross-sectional study where 86 of children with autism and 86 of typically developed children are assessed using two standardized assessments which are Minnesota Handwriting Assessment (MHA) and Developmental Test of Visual Perception Second Edition (DTVP-2). The results show that there is medium positive correlation between age and handwriting performance, r=0.31, n=86, p<0.005 for children with autism and r=0.37, n=86, p<0.005 for typically developed children where older children have better handwriting performance compared to younger children. Apart from that, there is medium positive correlation between visual perception and handwriting performance among children with autism, range from 0.32 to 0.528, n=86, p<0.005. In addition, there is medium positive correlation between visual perception and handwriting performance among typically developed children, range from 0.23 to 0.461, n=86, p<0.005. Findings of the present study show that children with good visual perception skills able to produce good handwriting. Perhaps, in the future occupational therapy should be directed toward enhancing the visual perception skills when giving intervention to children with handwriting difficulty, especially children with autism. In conclusion, poor visual perception skills such as eye-hand coordination, position in space, copying, figure-ground, spatial relations, visual closure, visual motor speed and form constancy will produce poor legibility and reduce handwriting speed.

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TABLE OF CONTENT