Hands up for handwriting

Editorial

As President of the 16th Scientific Meeting of the European Academy of Childhood Disability, I have been privileged to influence the scientific programme and place some emphasis on issues of hand function. Thus we will enjoy being addressed at the Edinburgh meeting by Professor Sheila Henderson on the topic of 'What makes handwriting so difficult?'.

Development of skilled hand movements in school-aged children follows a predictable pattern but has a highly variable course in rate of acquisition. This is particularly so for handwriting as this important skill encompasses both penmanship with fine motor control and written language and spelling. It can be difficult to predict which children are going to experience longer term problems in acquiring the skill of handwriting. Consequently, most children with dysgraphia are identified only after a number of years of failing in the education system.

Children from disadvantaged backgrounds may experience greater difficulty with novel motor sequencing tasks when they are demonstrated verbally or through diagrams, but they fare better if the task is directly imitated.[1] How often do we take this into account in their instruction? In addition, girls are known to have an advantage over boys in handwriting output and this gap only closes towards the end of secondary school (12–18 years): to what extent do we take this into account?[2]

Most of what we do know about handwriting difficulties or dysgraphia relates to school children who have unexpected delays in motor skills acquisition, such as in developmental coordination disorder which, by definition, excludes acquired neurological conditions. These children frequently have phonological awareness problems which affect their reading and spelling. Developmental coordination disorder has diagnostic criteria which are difficult to apply in clinical practice. Limitations in academic achievement and activities of daily living are inclusion criteria for the condition. Educationalists may refer children who have more general difficulties in the belief that their educational problems arise from developmental coordination disorder. A recent study demonstrated that only 20% of children referred from education staff to a paediatric occupational therapy department met the criteria for developmental coordination disorder.[3]

However, those children who do enter school with definite motor problems of this nature have persisting difficulties when followed-up into their middle primary school years (8–10 years).[4] The natural history of the dysgraphia in children with these developmental forms of slow motor acquisition is not fully delineated.

Even less is known about children who have acquired dysgraphia. This can be a very intrusive disability for children who have mild neurological impairment and are included in mainstream schooling. Clinicians have a role in assisting these children by interpreting for education colleagues what type of prognosis they might expect. In children with a mild cerebral palsy for example, they can help secure timely interventions for the children who otherwise run the risk of disillusionment as they struggle with their poor writing speed and legibility. Even a few simple questions, such as whether the child can keep up with their writing output in class, and whether the final result is a legible record for both the child and teacher, can serve to alert people to consider dysgraphia.

In conclusion, we need to know more about the longitudinal course, early features, and intervention in dysgraphia. As children with dyslexia benefit most with early intervention,[5] there is no reason to believe that this would be any different for dysgraphia and, therefore, it is important that we try to recognize the condition as early as possible. Problems in acquiring writing skills can lead to misery at school with unwelcome attention and demoralizing misunderstanding. Learning to write is a Herculean task. Even the Anglo-Saxon derived words in the English language, which are the short everyday words found frequently in primary school (5–12 years) books, require approximately 170 graphemes of single consonants and vowels and consonant and vowel combinations that correspond to the 42 speech sounds or phonemes.[6]

Fortunately there is plenty of help available for children with dysgraphia. In particular there is the Handwriting Interest Group in the UK, which is a multidisciplinary organization promoting understanding and support for handwriting, and which will be 21 years old next year (www.handwritinginterestgroup.org.uk). There is so much that can be done to support children with dysgraphia simply by being aware. And so, if I can lapse into the vernacular, 'Go 4 It'.

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References

1. O'Hare A, Gorzkowska J, Elton R. (1999) Development of an instrument to measure manual praxis. *Dev Med Child Neurol* **41:** 597–607.
2. DuHon GP. (1992) Writing under exam conditions – establishing a baseline. *Handwriting Review*. **1:** 80–101.
3. Dunford C, Street E, O'Connell H, Kelly J, Sibert JR. (2004) Are referrals to occupational therapy for developmental coordination disorder appropriate? *Arch Dis Child* **89:** 143–147.
4. Pless M, Carlsson M, Sundelin C, Persson K. (2002) Preschool children with developmental coordination disorder: a short term follow-up of motor status at seven to eight years of age. *Acta Paediatr* **91:** 511–528.
5. Nicolson RI, Fawcett AJ, Moss H, Nicholson MK. (1999) Early reading intervention can be effective and cost-effective. *Br J Educ Psychol* **69:** 47–62.
6. Henry MK. (1997) The Decoding/Spelling Curriculum: integrated decoding and spelling instruction from pre-school to early secondary school. *Dyslexia* **3:** 178–189.