Towards an automatic assessment of impaired handwriting (and visuo-motor skills) in children with ADHD

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Background
– Handwriting is relevant for school achievement and children spend up to 60% of their day performing fine motor skills.1
– More than 50% of children diagnosed with ADHD experience difficulties with fine motor skills such as handwriting.2
– Digital pens revealed that children with ADHD exert more pressure, write slower and vary their strokes more.2

Aim: Is it feasible to use digital pens to assess handwriting and fine motor skills to investigating potential differences between children with and without an ADHD diagnosis?

Method
– As sample we target to assess 40 school-aged children between 8 and 12 years. Children with an ADHD diagnosis (n=20) will be recruited and diagnosed through the Centre of Social Pediatrics in Winterthur, children without an ADHD diagnosis (n=20) will be recruited though primary schools and pediatricians in Winterthur.
– Fine motor skills and handwritings skills are assessed by Beery VMI and SEMS handwriting test using a digital pen.
– Motor activity is measurement by Actigraphs on both wrists and on the hip as a covariate.
– IQ-Scores are assessed by WISC-V as a covariate.

References

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