

Summary Matrix for the Doctoral Thesis Motor skills, Attention and Academic achievements

| Study Citation | Study Focus & Setting | Sample Characteristics | Study Design & Data Collection | Intervention Conditions | Key Outcomes & Results ¹ | | |
|--|--|---|---|--|---|--|-------------------|
| <p>Ericsson I.</p> <p>Motor skills, attention and academic achievements: an intervention study in school years 1-3.</p> <p><i>British Educational Research Journal</i> 2008;34(3):301-313.</p> | <p>Study focus: PE Class</p> <p>Description: Motor skills and attention and academic achievement</p> <p>Setting: School, PE class</p> <p>Country: Sweden</p> | <p>Sample 1: Youth N: 251 Age Range: 7-9 years Mean Age: NR Grade: Primary (1st-3rd grades) Gender: 137 boys and 114 girls Ethnicity: NR</p> | <p>Study Design: Quasi-experimental</p> <p>Data Collection Method and Time Points: Skill assessment using MUGI checklist (Observation of 16 gross motor tasks measuring balance/bilateral coordination and hand-eye coordination) in Grades 2 and 3 ⌚ 3 times, data collection timepoints varied by cohort (Baseline, year 2, year 3)</p> <p>Paper pencil survey using Conners' questionnaire (Teachers' and parents' conception of children's' attention ability and impulse control) ⌚ 3 times (Baseline, year 2, year 3)</p> <p>Standardized tests (Special education teachers document reading development in Grades 1 and 2) ⌚ 3 times (Baseline, 6 months, 18 months)</p> <p>Standardized tests (National tests in Swedish, math, words, reading) ⌚ 1 time (Swedish & Math Spring in Grade 2, words & reading Spring in Grade 3)</p> | <p>Conditions: Intervention: Students received PE lessons 5 days per week. Comparison: Standard PE lessons 2 days per week.</p> <p>Methods: Intervention: 3 regular school PE lessons per week plus different local sports clubs gave physical activity lessons for 2 more lessons every week, in total 5 lessons of motor skills training and physical activity per week, and if needed (for students deemed motor deficient), one extra lesson of MUGI motor training per week was provided.</p> | <p>Do students with good motor skills have better attention than students with deficits in motor skills (as observed by teachers and parents)?</p> | <ul style="list-style-type: none"> • Attention • Impulse control | <p>+</p> <p>+</p> |
| | | | | | <p>Do students in intervention groups have better attention than students in comparison group (as observed by teachers and parents)?</p> | | |
| | | | | | <ul style="list-style-type: none"> • Attention Grade 2 • Impulse control Grade 2 • Attention Grade 3 • Impulse control Grade 3 | <p>+</p> <p>+</p> <p>0</p> <p>0</p> | |
| | | | | | <p>Do students in intervention groups have better standardized test scores than students in comparison group?</p> | | |
| | | | | | <ul style="list-style-type: none"> • Swedish reading and writing • Math (spatial ability and number conception) ** <p>**Additional analyses by gender showed that intervention boys had significantly better math scores overall than control boys.</p> | <p>+</p> <p>+</p> | |
| | | | | | <p>Do children's observed motor skills improve with extended physical activity and extra motor training in school?</p> | | |
| | | | | | <ul style="list-style-type: none"> • Motor skills overall • Balance/bilateral coordination • Hand-eye coordination | <p>+</p> <p>+</p> <p>+</p> | |

¹ Results are coded as: + signifies a significant positive outcome; 0 signifies no significant outcome; - signifies a significant negative outcome

⌚ Indicates data collection time points