

TRAJECTORIES OF MOTOR COORDINATION IN 4-7-YEARS OLD CHILDREN: A LATENT GROWTH CURVE ANALYSIS

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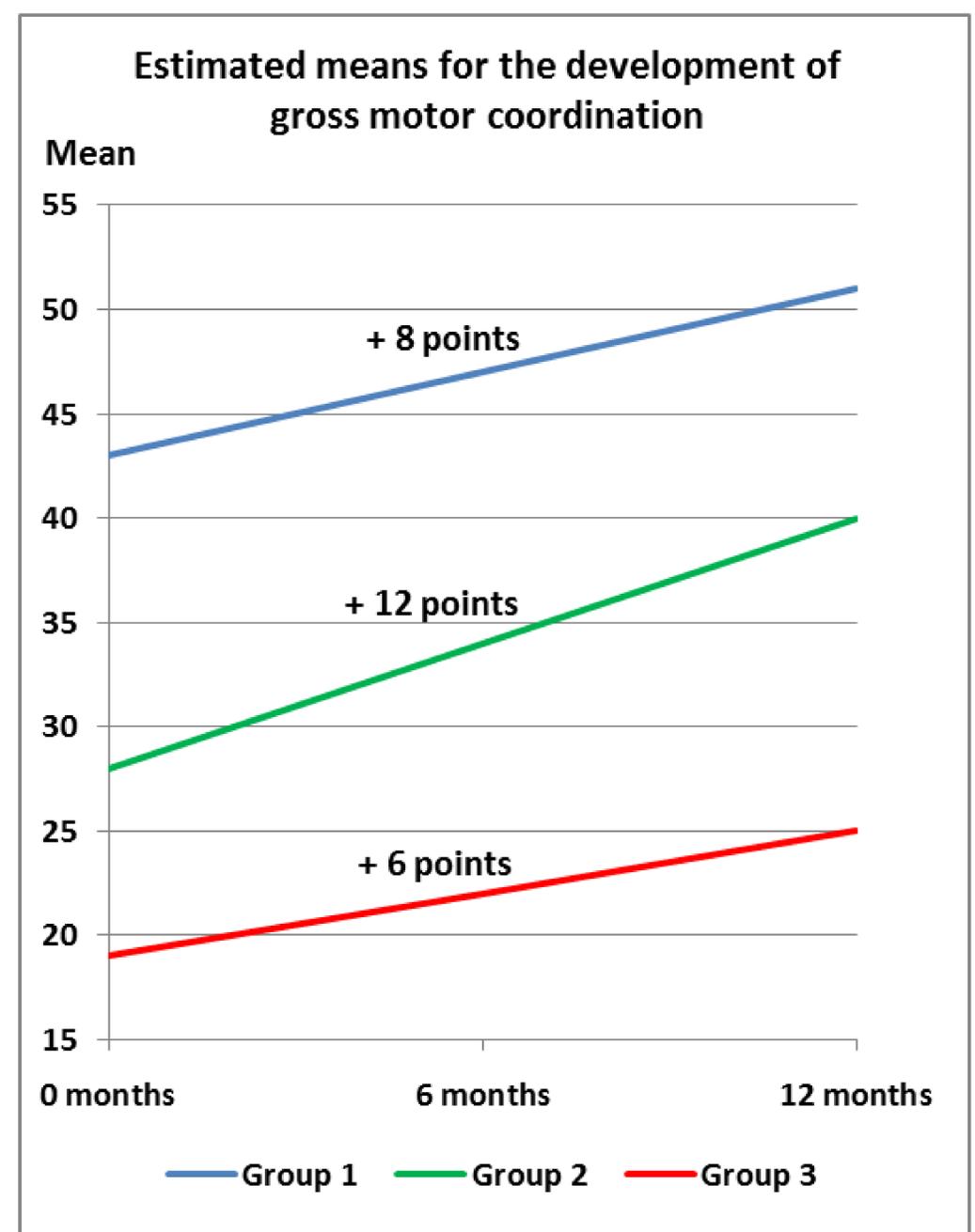
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Introduction: For being able to take part in physical activities typical to the given age, children need proficiency in several motor tasks. Gross motor coordination (MC) is a basis for executing motor tasks and for learning new movement patterns. This study aimed to identify different MC trajectories in children aged 4-7-years old.

Results: In general, MC developed significantly over the year-long follow-up ($p < 0.001$). Three different groups of children ($n=21/39/39$) were identified regarding the level and trend of development of MC. The group with the lowest level of MC had significantly lower trend of development of MC ($p < 0.05-0.001$) than other groups. Even though the group with the lowest level of MC consisted of younger children (mean age 5.3 years at 0 months) than other groups (mean ages 5.7 and 7.2 years at 0 months), the age did not significantly affect the developmental trend of MC. There were no sex differences in the trajectories of MC.

Conclusions: This study showed that MC is developing along the age in general. However, children among the group with the lowest level of MC have a significantly lower developmental trend of MC than children in the groups with higher level of MC. Results suggest that the development of MC is polarized in early age. Further examination on characteristics associated with the low developmental trend of MC is needed.

Methods: Motor coordination of apparently normal children ($n=94$, 50 girls, mean age 6.1 ± 1.3 years at baseline) was measured at 0, 6 and 12 months by KTK-test battery¹. To identify different MC trajectories, developmental trend of the mean score of KTK was analyzed by using a latent growth curve and growth mixture analysis.



References:

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