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ARTICLE REVIEWED

An Examination of Motor Competence Profiles in Preschool Children: A Latent Profile Analysis

Starrett, A., Pennell, A., Irvin, M. J., Taunton Miedema, S., Howard-Smith, C., Goodway, J. D., Stodden, D. F., & Brian, A. (2021). An examination of motor competence profiles in preschool children: A latent profile analysis. *Research Quarterly for Exercise and Sport, 92*(2), p. 1-10.

THE PROBLEM:

The psychomotor domain is often the dominant focus in physical activity. One psychomotor outcome is motor competence (MC), which is the ability of an individual to perform movements accurately and with coordination (Anson et al., 2005; Robinson et al., 2015). MC should be practiced early and often, specifically in young children (ages 3-5) as this has been identified as a crucial timeframe for psychomotor development. Additionally, early MC has led to children meeting other health outcomes, such as perceptual, socioemotional, and cognitive (Kim et al., 2016; Piek et al., 2008). Therefore, the purpose of this article was to examine profiles of preschoolers' MC in clusters to examine differences based on multiple factors.

Research Summary:

The participants of the study were 582 children from multiple states, all from ages 3 to 6. All children were enrolled in an early childhood education center. The participants' MC was measured using the *Test of Gross Motor Development, Second Edition* (TGMD-2), which has two subscales: locomotor and object control skills. The children were scored dichotomously with a score of "0" given if a criterion of the movement was not observed and a "1" if it was observed.

Conclusion:

The authors found that multiple MC profiles are present in early life, which aligns with previous research that motor development is age related (Clark, 2017). The analysis of the participants' TGMD-2 and their demographics identified five MC profiles, which were emerging motor competence (EMC), approaching motor competence (AMC), approaching locomotor proficiency (LOC), approaching object control proficiency (OC), and proficient motor competence (PMC).

Key Takeaway:

In this paper, the authors found that older boys from higher socioeconomic and urban backgrounds were more likely to be in the PMC profile. Thus, the authors challenge researchers to explore MC profiles further with the use of person-centered approaches to better understand what interventions should be made to close the gap between groups.

ADDITIONAL RESOURCES:

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Clark, J. E. (2017). Pentimento: A 21st century view on the canvas of motor development. *Kinesiology Review*, 6(3), 232–239.

Kim, H., Carlson, A. G., Curby, T. W., & Winsler, A. (2016). Relations among motor, social, and cognitive skills in pre-kindergarten children with developmental disabilities. *Research in Developmental Disabilities*, 53–54, 43–60.

Piek, J. P., Dawson, L., Smith, L. M., & Gasson, N. (2008). The role of early fine and gross motor development on later motor and cognitive ability. *Human Movement Science*, 27(5), 668–681.

Robinson, L. E., Stodden, D. F., Barnett, L. M., Lopes, V. P., Logan, S. W., Rodrigues, L. P., & D'Hondt, E. (2015). Motor competence and its effect on positive developmental trajectories of health. *Sports Medicine*, 45(9), 1273–1284.