

## ARTICLE REVIEWED

### Global levels of fundamental motor skills in children: A systematic review

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#### THE PROBLEM

According to Stodden and colleagues (2008), a lack of motor skill competence can lead to a negative spiral of disengagement that includes lower levels of physical activity, perceived competence, and fitness. Physical inactivity is a worldwide problem. The World Health Organization (WHO) reports that a majority (80%) of the world's adolescents are not physically active and 1 in 4 adults do not meet recommended physical activity guidelines. Therefore, it is important to understand how from a young age, children can learn fundamental motor skills (FMS) to prepare them for physical activity participation at later stages of their lives.



#### Research Summary:

This paper reviewed several studies to describe children's levels of FMS according to the Test of Gross Motor Development-2. Seven databases were searched for studies published between the years 2004 to 2019. Studies were included if their sample consisted of typically developing children between the ages of 3 and 10 and if the children were assessed using the Test of Gross Motor Development-2. Sixty-four articles with more than 21,000 children from 25 countries were included for review. Means and standard deviations were calculated for TGMD-2 raw scores, standardized scores, or mean percentiles. Additionally, the authors evaluated individual age groups from ages 3 to 10 and age ranges of 3-5, 6-8, and 9-10.

#### Conclusion:

Overall, children's raw scores for locomotor skills, object control skills, and total FMS increased with age. However, lower scores were observed in 9-year-old children's raw locomotor and object control skills compared to younger children. In evaluating gross motor quotient, standardized locomotor, and standardized object control scores, younger children had "average" performance, while older children were "below average." Children were the most proficient in running and the least proficient in the roll.

#### Key Takeaway:

In this review, the authors described FMS of children from various countries. There is a general trend of improvement of FMS with age, with the exception at age 9. Additionally, children performed better in locomotor skills than object control skills, indicating that perhaps more time and instruction are needed to master them.

#### ADDITIONAL RESOURCES

Stodden, D. F., Goodway, J. D., Langendorfer, S. J., Roberton, M. A., Rudisill, M. E., Garcia, C., & Garcia, L. E. (2008). A developmental perspective on the role of motor skill competence in physical activity: An emergent relationship. *Quest*, 60(2), 290-306.  
<https://doi.org/10.1080/00336297.2008.10483582>

World Health Organization. (2017). Physical activity key facts. <https://www.who.int/news-room/fact-sheets/detail/physical-activity>