Exploring Predictors of Children’s Motor Competence within the Context of the Canadian Assessment of Physical Literacy (CAPL)

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BACKGROUND
- Physical literacy is “the motivation, confidence, physical competence, knowledge and understanding to value and take responsibility for engagement in physical activities for life.” It is an important component of acquiring the knowledge, skills, and attitudes that are essential for participation in long term physical activity and sport.1
- Age is a positive correlate of motor competence (object control, locomotor, and stability).2 Further, motor competence has a positive relationship with cardiorespiratory endurance and muscular strength/endurance, which tends to strengthen as children get older.3
- There is limited literature investigating motor skill correlates in children and adolescents, more specifically exploring the roles of various correlates, the strength of the relationships across time, and the direction of these associations.4

PURPOSE
- To explore the relationship among components of children’s physical literacy with a focus on motor competence, specifically object control and locomotor skills.

METHODS
Participants
- Children from Northeastern Ontario (n = 1137; 52% F; M = 9.76, SD = 1.28) participated in the standardized CAPL, protocol measuring physical competence (PACER run, Canadian Agility and Movement Skill Assessment (CAMSA), grip strength, plank, BMI, waist circumference, sit and reach), daily behavior (pedometer wear and questionnaire), motivation/confidence (questionnaire), and knowledge/understanding of physical activity (questionnaire).

Measures and Procedures
- Motor competence were assessed by the CAMSA, a standardized obstacle course that includes both object control and locomotor skills (Figure 1).
- Skills were assessed by trained raters and children’s ability to meet skill-related criteria associated with proficient performance for each skill was used to create an average score for object control (max 5 points/trial) and locomotor skills (max 9 points/trial) from 2 timed trials.

RESULTS
Age & Gender Effects
- A 2x2 (Gender) x 5 (Age) MANOVA was conducted separately for object control and locomotor skills.

Physical Literacy Components Predicting Object Control & Locomotor Skills
- Hierarchical multiple regression analyses were conducted to examine which measures positively predicted motor competence. Age and gender were entered at step 1, with the remaining variables entered at step 2. Separate regressions were done for object control and locomotor skills.

DISCUSSION AND CONCLUSION
- Findings align with previous studies that suggest motor competence tends to increase with age.4 The results of this study show that as the children get older, an upward trend was seen for object control and locomotor skills scores.
- Results also support literature highlighting that gender is related to certain aspects of motor competence, with boys having stronger object control skills.2 Therefore, it is important to develop strategies and opportunities that enhance young girls’ object control skills.
- Previous physical literacy research shows that competence in fundamental movement skills is both predictive and correlated to physical activity, fitness, body weight status, and cognitive/academic outcomes.6 The results of this study extend this work by suggesting which physical literacy components may be predictive of different types of motor skills (i.e., object control vs. locomotor).
- Overall, the findings indicate that different components of physical literacy are related to children’s performance on object control and locomotor skills. Further longitudinal research is merited to examine these relationships over time.

REFERENCES

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