



Making Movement Matter: An Implementation Dose-Response Evaluation of a Physical Literacy Program for Children

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Abstract

Background: Physical literacy (PL) is defined as the motivation, confidence, physical competence, knowledge, and understanding to value and take responsibility for engagement in physical activities for life. Given concerns with child and youth physical inactivity, the concept of PL is gaining interest as a foundation for greater PA participation. A school-based PL program called Make Movement Matter (MMM) was implemented in one elementary school district. The objective of this study was to assess PL changes over time and assess if there was a relationship between implementation dose and changes in PL. A second objective was to assess gender differences in PL changes over time.

Methodology: The program was evaluated using a longitudinal dose-response cohort study design, as the PL of a cohort of grade two students in 14 schools was assessed at three time points over two years. PL was measured at each time point using two Physical Literacy Assessment for Youth (PLAY) tools: PLAYfun (measure of children's fundamental movement skills) and PLAYself (measure of children's perceptions of PL and attitudes towards PA). Implementation dose was tracked through school checklists completed after each visit by PL mentors. The study was approved by the University of British Columbia Behavioural Research Ethics Board (H21-03586).

Results & Conclusion: PL (PLAYfun and PLAYself) was found to significantly change over time ($p > .001$), with implementation dose having a significant effect for PLAYfun ($p < 0.001$) and no effect for PLAYself ($p = 0.526$). Gender was tested in both models, and no significant differences were found (PLAYfun: $p = 0.102$; PLAYself: $p = 0.197$). This is the first study to examine the relationship between implementation dose and PL outcomes. As higher dose of implementation was associated with greater changes in PLAYfun, positive changes in PL may be partly attributed to the MMM program. These findings may have implications for future practice in implementing school-based PL interventions.

Keywords: Physical Literacy; Implementation Evaluation; Fundamental Movement Skills; Implementation Dose