

Physical Activity, BMI, and Fundamental Movement Skills in an Underserved Irish Cohort of Primary School Aged Children

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Background: Children attending paediatric therapy services present unique challenges related to physical activity (PA), fundamental movement skills (FMS), and body mass, but insufficient data is available on this cohort globally. Persistent motor impairments extending into adolescence/adulthood negatively impact children’s independent living skills, PA levels, physical/mental health, and overall wellbeing. This study examined the PA levels, motor proficiency, body mass index (BMI), and any relationships between these variables, in primary school children attending, or awaiting, paediatric therapy services in Cork, Ireland.

Methods: Primary school children ($n = 23$, age range: 7–12 years, mean age: 9.99 ± 1.26 years) from second (7–8-year-olds) to sixth (11–12-year-olds) class participated in the study. Participating children were referred from primary care services including physiotherapy, occupational therapy, and dietetics. PA was assessed via a self-reported PA Diary and PA Questionnaire, BMI was calculated using standard growth charts, and motor proficiency was measured using the Test of Gross Motor Development-2 (TGMD-2). Descriptive statistics, group comparisons, and correlation analyses were conducted.

Results: Overweight/obesity prevalence was high ($n = 23$, 73.9%), with older children recording significantly higher body mass than younger children ($p < .05$). Only 4.3% ($n = 1$) met PA guidelines (≥ 60 min/day moderate-to-vigorous PA), with older children (10–12-year-olds) engaging in significantly more PA ($p < .05$) than their younger counterparts (7–9-year-olds). Significant FMS deficits were observed, with children performing 3–4 years below their chronological age when compared with United States normative data. Bivariate correlations showed a negative association between BMI and locomotor skills (e.g. run: $r = -.66$, $n = 13$, $p < .05$; leap: $r = -.87$, $n = 8$, $p = .005$) and a positive association with object-control skills (e.g. catch: $r = .89$, $n = 8$, $p < .05$; roll: $r = .73$, $n = 8$, $p < .05$). PA was positively correlated with the catch and jump skills, reinforcing the link between movement competence and activity participation.

Conclusion: Findings highlight the need for targeted interventions that support children attending paediatric therapy to improve motor proficiency and PA participation. Early structured and appropriate PA programmes may enhance children’s movement competence, PA levels, and overall health.

