

## **Children's Segmented Physical Activity and Sedentary Time during School Days, Recess, Out of School, and Weekends across Two School Years**

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The majority of Finnish school children need to have a more physically active lifestyle in order to get more health benefits, since three-fourth of 11 to 15-year-olds fail to accumulate at least 60 minutes of moderate to vigorous physical activity (MVPA) on a daily basis. However, these findings are derived from self-reported data, and therefore, objective, physical activity data are needed to better understand the levels and patterns of physical activity and sedentary behavior. The present study extends the previous findings by investigating children's segmented MVPA and sedentary time using accelerometers across a period of two school years.

The sample comprised 76 elementary school children (39 girls, 37 boys) aged between 10 to 13-years ( $M = 11.37$ ;  $SD = .73$ ) from two elementary schools located in Northeast Finland. Accelerometers were used for the objective assessments of children's physical activity and sedentary time patterns across a seven-day period in two measurement phases 2012-2014. The results highlighted that children were more physically active on weekdays than weekends. However, children's MVPA during school days, recess, out of school decreased across two school years. In turn, children's daily sedentary time increased through the two-year period. Based on the present findings, the biggest challenge in the future is to sustain and enhance children's physical activity, especially on weekends, and in turn, reduce sedentary time as they transfer to higher grades.

Keywords: physical activity, sedentary time, accelerometer, elementary school, school day, weekend