

## Abstract

*Background:* Previous work has shown little association between self-report and directly measured physical activity. The objective of this study was to investigate the relationships between self-reported and directly assessed measures of physical activity and sedentary time by weight status in Kenyan children.

*Methods:* Direct assessment of body weight, physical activity and sedentary time of 563 children was collected through anthropometry and accelerometry, while self-reported assessment was achieved by administering a questionnaire.

*Results:* Under/healthy weight children had significantly higher directly measured mean daily minutes of moderate-to-vigorous physical activity (MVPA) compared to overweight/obese children (39 vs 20 minutes); had lower mean weekend-day minutes of sedentary time (346 vs 365 minutes); had a higher proportion who met accepted physical activity guidelines (15.3% vs 2.6%); and a higher number reported using active transportation to/from school (49.2% vs 32.4%). Self-reported time spent outside before and after school and active transport to/from school were significantly associated with mean weekday minutes of MVPA ( $r$ -value range = 0.12–0.36), but only for the under/healthy weight children.

*Conclusions:* The results of this study found a number of differences in the accumulation of MVPA and sedentary time by weight status and weak-to-moderate correlations between self-report and direct measures of weekday and weekend-day physical activity among the under/healthy weight children.