The Validity of an Online Tool for the Assessment of Physical Activity Behaviors in Youth

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Background

• Assessing Physical Activity (PA)
  – Monitors
  – Self-Report Recalls

• Challenges With Youth
  – Sporadic PA Patterns
  – Less-developed recall abilities

• Purpose: to examine the efficacy of the Youth Activity Profile (YAP), a new online PA survey that uses context-related cues to facilitate accurate assessments of PA patterns in youth.
Methods

• Participants
  – N=51
  – Grades 5, 7, and 9
  – 27 females, 24 males

• Tools
  – SenseWear Armband (SWA)
  – Youth Activity Profile (YAP)
Activity Levels at School
These questions ask about your physical activity at school. This includes physical education but you may also be active on your way to school, during school breaks, or at lunch. **Answer the questions based on your physical activity at school in the last 7 days.**

3. **Activity During Breaks/Study Hall:** During breaks/study hall, how often were you playing sports, walking, running, or playing active games? *(If you didn't have a break at school, choose "I didn't have breaks/study hall")*

- I didn't have breaks/study hall
- Almost none of the time
- A little bit of the time
- A moderate amount of the time
- A lot of the time
- Almost all of the time
Methods - Protocol

• Recruitment, Consent, Assent

• Trial 1
  – Visit 1
    • Basic anthropometry
    • Provision of monitor and non-wear log
    • Instructions to participants
  – Visit 2 (1-week follow-up)
    • Collection of monitors, non-wear log
    • Collection of class schedules
    • YAP administration
    • Compensation

• Trial 2 (repeated 2-3 weeks later)
Methods – Data Processing/Analysis

• Data Processing
  – Monitors
    • Monitors were downloaded
    • Estimates of moderate to vigorous physical activity (MVPA) and sedentary behavior determined
      – Direct from monitor software
      – Based on non-wear log book via compendium of physical activities.
  – Youth Activity Profile (YAP)
    • Data from website was downloaded
    • Summary scores were computed for subscales
      – Physical Activity (school and out of school)
      – Sedentary Time

• Analyses
  – MVPA and sedentary estimates were compared with corresponding YAP responses
  – Spearman Rank Correlations show associations
**Results**

Correlations of YAP MVPA items to monitor data

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Overall Sedentary
Summary of Results

• Association observed between self-reported and measured PA (correlation coefficients ranged from 0.186 to 0.4597, with one significant negative correlation coefficient of -0.3668).

• Association observed between self-reported and measured sedentary behavior (correlation coefficients ranged from 0.0263 to 0.5695, with one negative correlation coefficient of -0.0519).
Discussion

Aspects needing further investigation
– Effects of survey duration on response
– Effects of lifestyle on response
– Effects of PA experience on response

Limitations
– Small sample size
– Estimation of non-wear energy expenditure
– Problematic SWA’s
Conclusions

• Overall, promising survey
• Some items need to be revisited/revised
  – Lunch
  – Sedentary activities