Validity of self-reported leisure-time sedentary behavior in adolescents.

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Abstract

BACKGROUND: To evaluate the concordance between leisure-time sedentary behavior in adolescents assessed by an activity-based questionnaire and accelerometry. A convenience sample of 128 girls and 73 boys, 11-15 years of age (12.6 ± 1.1 years) from six states across the United States examined as part of the feasibility studies for the Trial of Activity in Adolescent Girls (TAAG). Three days of self-reported time spent watching TV/videos, using computers, playing video/computer games, and talking on the phone was assessed using a modified version of the Self-Administered Physical Activity Checklist (SAPAC). Criterion measure of sedentary behavior was via accelerometry over three days using a cut point of < 50 counts · 30 sec⁻¹ epoch. Comparisons between sedentary behavior by the two instruments were made.

RESULTS: Adolescents generally underestimated minutes of sedentary behavior compared to accelerometry-measured minutes. The overall correlation between minutes of sedentary behavior by self-report and accelerometry was weak (Spearman r = 0.14; 95% CI 0.05, 0.23). Adjustment of sedentary minutes of behavior for total minutes assessed using either percentages or the residuals method tended to increase correlations slightly. However, regression analyses showed no significant association between self-reported sedentary behavior and minutes of sedentary behavior captured via accelerometry.

DISCUSSION: These findings suggest that the modified 3-day Self-Administered Physical Activity Checklist is not a reliable method for
assessing sedentary behavior. It is recommended that until validation studies for self-report instruments of sedentary behavior demonstrate validity, objective measures should be used.