

Comparison of self-reported and accelerometer-measured physical activity according to sociodemographic factors

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Abstract

Introduction: Determining level of physical activity (PA) can be done with objective measurement, through accelerometer, or by subjective measurement through self-report questionnaire. The aim of this study was to compare PA measurements derived from a self-reported questionnaire and accelerometer according to sociodemographic factors in the Chilean population. **Methods:** This was a cross-sectional study which included 230 Chilean adults participating in the GENADIO study (Genes, Environment, Diabetes and Obesity). PA levels were measured through the International Physical Activity Questionnaire (IPAQ) and GT1M accelerometer (ActiTrainer, ActiGraph). **Results:** IPAQ questionnaire underestimated the total PA levels compared to the accelerometer measurement ($\Delta[\text{IPAQ-Acel.}] = -55.7 \text{ min/day}$). According to educational level, IPAQ questionnaire overestimated PA level in people with low educational level ($\Delta[\text{IPAQ-Accel.}] = 70.4 \text{ min/day}$), but underestimated total PA in people with secondary education or university technician ($\Delta[\text{IPAQ-Accel.}] = -67.9$ and -135.6 min/day , respectively). Similar results were observed for the different levels of socioeconomic income. **Conclusion:** The IPAQ questionnaire underestimated total PA levels compared to accelerometer; however, these differences varied according to sociodemographic factors.

Author keywords

Accelerometer
Education
IPAQ
Physical activity
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