

# Is a single question of the Global Physical Activity Questionnaire (GPAQ) valid for measuring sedentary behaviour in the Chilean population?

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## Abstract

A study was conducted to assess the validity of the Global Physical Activity Questionnaire (GPAQ) for measuring sedentary behaviour (SB) in the Chilean adult population. About 217 adults (93/124 male/female,  $43.8 \pm 15.75$  years) who were randomly selected during National Health Survey 2009-2010 completed the protocol. The participants wore an ActiGraph GT3X (AG) for 7 consecutive days and then completed the GPAQ (single-item question for measuring time spent sitting in a usual day). Validity was examined using Spearman's correlation, mean bias and limits of agreement (LoA), with AG (vertical axis  $<100$  counts  $\cdot$  min<sup>-1</sup>) as the reference standard for estimates of SB in bouts of 1 (AG1), 5 (AG5) and 10 (AG10) min. Agreement between the GPAQ and AG for classifying data into quartiles and tertiles was assessed with kappa method. The GPAQ showed fair correlation with AG1, AG5 and AG10 (range = 0.23-0.26), with large mean biases (range = -293.9, -76.12 min  $\cdot$  day<sup>-1</sup>). Agreement between the GPAQ and AG1, AG5 and AG10 was poor for categorising time spent in SB into tertiles and quartiles. The single question from the GPAQ has shown fair validity for measuring SB and poor ability for correctly classifying individuals into tertiles or quartiles of SB in a Chilean population.