

METHODS: This was a multi-national cross-sectional study of 2478 adults from eight Latin America countries (i.e., Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, Peru and Venezuela). Perceived neighborhood built environment attributes were measured using the Neighbourhood Environment Walkability Survey. Sedentary time, light-intensity physical activity and moderate-to-vigorous physical activity data were collected using accelerometers. Linear regression models (β coefficient; 95%CI) was estimated.

RESULTS: No associations between different perceived neighborhood built environment attributes and sedentary time were found. Positive perceptions of walking/cycling facilities (β : 6.50; 95% CI: 2.12,10.39) were associated with more light-intensity physical activity. Perceptions of better aesthetics (Argentina) and better walking/cycling facilities (Brazil and Ecuador) were positively associated with light-intensity physical activity. Land use mix-diversity (0.14; 0.03,0.25), walking/cycling facilities (0.16; 0.05,0.27), aesthetics (0.16; 0.02,0.30), and safety from traffic (0.18; 0.05,0.24) were positively associated with moderate-to-vigorous physical activity. Land use mix-diversity, street connectivity, and safety from traffic were positively associated with moderate-to-vigorous physical activity in Venezuela.

CONCLUSIONS: Our findings have implications for policy recommendations which can in turn guide policies to promote physical activity in the region. Land use mix-diversity, walking/cycling facilities, aesthetics, and safety from traffic can maintain or increase levels of light-intensity physical activity or moderate-to-vigorous physical activity among Latin American adults.

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Active Transportation, Public Transport And Objectively Measured Meeting Of Physical Activity Guidelines In Adults

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PURPOSE: This study aimed to examine the associations of active transportation and public transport with the objectively measured meeting of moderate-to-vigorous physical activity (MVPA) and steps per day guidelines in adults by sex from eight Latin American countries.

METHODS: Data were obtained from the Latin American Study of Nutrition and Health, a household population-based, multi-national (i.e., Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, Peru and Venezuela), cross-sectional survey from 2524 participants aged 18-65 years. MVPA and steps per day were evaluated using Actigraph GT3X accelerometers. The active transportation (walking and/or cycling; ≥ 10 min) and mode of transportation (public and private) were collected using self-reported questionnaire. A logistic regression model was used to estimate the odds ratios and 95% confidence intervals for the associations of active transportation (also plus public transport) with meeting vs. not meeting (< 150 or ≥ 150 min/week) MVPA guidelines, and meeting vs. not meeting (< 7000 or ≥ 7000) steps per day guidelines adjusted for sociodemographic variables.

RESULTS: The medians of MVPA and steps per day evaluated by accelerometer were 28.3 (IQR: 16.4-46.4) min/day and 9706.5 (IQR: 6747.8-14018.1). The average time dedicated to active transportation were 12.8 (IQR: 2.8-30.0) min/day. Active transportation (≥ 10 min) was associated with higher odds of meeting MVPA guidelines (men: OR: 2.01; 95%CI: 1.58-2.54; women: OR: 1.57; 95%CI: 1.25-1.96). These results show greater association when considered active transportation plus public transport (men: OR: 2.98; 95%CI: 2.31-3.91; women: OR: 1.82; 95%CI: 1.45-2.29). Active transportation plus public transport was positively associated with meeting steps per day guidelines only in men (OR: 1.55; 95%CI: 1.15-2.10).

CONCLUSIONS: This study supports that active transportation plus public transport is significantly associated with meeting the MVPA and daily steps recommendations. Considering the multiple benefits associated with reducing the levels of private transport in health, society and the environment, promoting and investing in active transportation and public transport should be a priority at the public policy level in Latin America.

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Physical Activity Surveillance, Policy, And Research: 2020 Report From The Global Observatory For Physical Activity

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The Global Physical Activity Observatory (GoPA!) is an independent network of contacts in more than 160 countries. Its goal is to translate physical activity (PA) data into significant public health action and help countries meet the World Health Organization's target of a 15% reduction in physical inactivity by 2030.

PURPOSE: To present the changes in PA surveillance, policy, and research indicators from 2015 to 2020.

METHODS: GoPA! working groups developed indicators for the 2020 Second Set of Country Cards and 2nd Physical Activity Almanac

(<https://www.globalphysicalactivityobservatory.com/>). Data was collected for 217 countries and in 164, a local contact validated the data. Associations were calculated between surveillance, policy, and research indicators.

RESULTS: At least 1 PA article was found in 81.1% of countries worldwide. Of the 164 countries, 151 (92.1%) had at least one national survey assessing PA prevalence, 139 (84.8%) had at least two national surveys, 30 (18.3%) had three national surveys, and 13 (7.9%) had no surveillance. Low-income nations had less frequent monitoring than middle- and high-income countries. 62 (17.1%) countries had a standalone PA policy, 74 (45.1%) had a non-communicable disease prevention policy that included PA, and 28 (37.8%) had no PA policy. Positive and moderate associations ($P < .05$) were found between surveillance and policy ($\rho = 0.5410$), research and policy ($\rho = 0.5033$), and research and surveillance ($\rho = 0.4350$).

CONCLUSIONS: Filling PA surveillance, research, and policy gaps is critical for global PA promotion and improvement in one may benefit the others. GoPA! will continue periodic PA monitoring.

Supported by University of California San Diego, USA; Federal University of Pelotas, Brazil; Universidad de los Andes, Colombia.

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Handgrip Strength Asymmetry Is Associated With Future Accumulating Morbidities In Older Americans

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Functional asymmetries are an often-observed form of poor muscle function during aging that is typically not evaluated in handgrip strength (HGS) protocols. Examining such asymmetries in older populations may help in identifying persons at risk for future morbidities linked to poor muscle function.

PURPOSE: We sought to determine the association between asymmetric HGS and future accumulating morbidities in older Americans.

METHODS: The analytic sample included 18,506 participants aged 65.0 \pm 10.2 years from the 2006-2016 waves of the Health and Retirement Study. HGS was collected on each hand with a handgrip dynamometer. The highest HGS on each hand was used for determining HGS asymmetry ratio: (non-dominant HGS/dominant HGS). Persons with HGS asymmetry ratio < 1.0 had their ratio inverted to make all ratios ≥ 1.0 . Participants were categorized into asymmetry groups based on their inverted HGS asymmetry ratio: 1) 0.0%-10.0%, 2) 10.1%-20.0%, 3) 20.1%-30.0%, and 4) $> 30.0\%$. Each person reported the presence of healthcare provider diagnosed morbidities: hypertension, diabetes, cancer, chronic lung disease, cardiovascular disease, stroke, psychiatric problems, and arthritis. Separate covariate-adjusted ordinal generalized estimating equations were used for the analyses.

RESULTS: Every 0.10 (i.e., 10%) increase in HGS asymmetry ratio was associated with 1.21 (95% confidence interval (CI): 1.09-1.35) greater odds for future accumulating morbidities.

Compared to those with HGS asymmetry 0.0%-10.0%, persons with wider asymmetry had greater odds for future accumulating morbidities: 1.07 (CI: 1.02-1.12) for HGS asymmetry 10.1%-20.0%, 1.09 (CI: 1.02-1.16) for HGS asymmetry at 20.1%-30.0%, and 1.22 (CI: 1.11-1.35) for HGS asymmetry $> 30.0\%$.

CONCLUSIONS: Functional asymmetries between limbs, as another form of muscle dysfunction, are associated with future morbidity accumulation in during aging. Moreover, wider strength asymmetries between limbs may especially elevate risk for future morbidity accumulation. We recommend that health practitioners evaluate HGS asymmetry as a simple screening mode for helping to determine poor muscle function and future morbidity risk.