


# Cohort profile: HABITAT—a longitudinal multilevel study of physical activity, sedentary behaviour and health and functioning in mid-to-late adulthood

International Journal of Epidemiology, 2020, 1–2

doi: 10.1093/ije/dyaa175

Pocket Profile



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**Key words:** Cohort, multilevel, physical activity, sedentary behaviour, health, function

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**Cohort purpose:** HABITAT was set up to examine change in physical activity, sedentary behaviour, health and physical functioning in a ‘baby boomer’ cohort, and to assess the relative contribution of environmental, social, psychological and sociodemographic factors to these changes.

**Cohort basics:** Baseline data were collected in 2007 in the Local Government Area of Brisbane, Australia, from a population-representative sample of 11 035 adults (68.4% response rate) aged 40–65 years residing in 200 Census Collector Districts.

**Follow-up and attrition:** Follow-up comprised self-completed questionnaires in 2009 ( $n=7,866$ , 72.6% response rate), 2011 ( $n=6,900$ , 67.6%), 2013 ( $n=6,520$ , 67.6%) and 2016 ( $n=5,187$ , 58.8%) administered by mail-survey to the main cohort, and two clinical assessments of a subsample in 2014 ( $n=767$ , response rate 54.6%) and 2016 ( $n=606$ , 79.0%).

**Design and measures:** HABITAT is a multilevel prospective cohort study. Self-report data were collected on walking, leisure time and transport-related physical activity, sedentary behaviour, perceptions of the neighbourhood environment (natural, built and social), social support, life events, facilitators of and barriers to physical activity, transport use, health, physical functioning and wellbeing (mental and physical), falls and sociodemographic characteristics. Individual-level data have been linked to mortality records. Geographic Information Systems analysis was used to create built environment measures (at various scales) of residential density, street connectivity, land use mix, streetlights, traffic volume, greenspace, public open space, transport nodes, crime, bikeways and walkability. Objective measures of blood pressure, resting pulse rate,

anthropometry (height, weight, waist circumference), balance, grip strength, physical function and physical activity (accelerometer and Global Positioning Systems) were collected from sub-study participants.

**Unique features:** HABITAT is the largest-known multilevel longitudinal study of how environmental, social, psychological and sociodemographic factors influence physical activity, sedentary behaviour and health as people age during the second half of life. Natural experiments nested within the cohort study (e.g. residential relocation) provide insights into the nature and strength of relationships between the neighbourhood environment and behaviours, risk factors, health and wellbeing. The study’s findings are providing policy makers and other stakeholders with vital evidence about preventing or delaying the onset of chronic disease and declines in physical function; and this evidence will help inform efforts to reduce the social, health and economic burden associated with an ageing population. A full list of publications can be found at: <https://cur.org.au/project/habitat/>.

**Reasons to be cautious:** HABITAT is an observational cohort study based primarily on self-report data and hence subject to all the biases and limitations inherent in this design. As is the case with most cohort studies, response rates have decreased over time and sample heterogeneity has narrowed. Differential attrition has led to an overrepresentation of more educated people, employees in professional and managerial occupations, members of higher-income households and residents of more socioeconomically advantaged neighbourhoods.

**Collaboration and data access:** HABITAT study material and collaboration documents are available at <https://cur.org.au/project/habitat/>. Applicants must submit a HABITAT Expression of Interest to the study’s Principal Chief Investigator: [gavin.turrell@rmit.edu.au](mailto:gavin.turrell@rmit.edu.au).

**Funding and competing interests:** The core funding for HABITAT has been provided by three Australian National Health and Medical Research Council (NHMRC) Project Grants (#339718, #497236, #1047453). BGC is supported by an NHMRC Senior Principal Research Fellowship (#1107672). The investigators declare no conflict of interest.

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