

Activity / sleep / geolocation tracker project:

Key conclusions from consultation workshops with topic experts

[September 2023]

We hosted two online consultation workshops (on 14/09/23 and 18/09/23) with 14 international topic experts working in the areas of health, wellbeing, neighbourhood effects, physical activity, and sleep, who used activity trackers in their research either in specialised studies or in long-standing surveys in the UK and the US (i.e. ELSA, Understanding America Study, SPACE).

The aim of the workshops was to get feedback on the proposed design options of the study, learn about potential uses of such data by researchers, and understand potential pitfalls based on experts' experiences with activity trackers.

The general opinion expressed by participants was that the combination of these three types of data (sleep, physical activity, and GPS) together with self-reports, especially collected over a longer period of time, is innovative and timely with substantial potential to provide unique opportunities for scientific research with and across disciplines. The potential scientific contribution of the proposed data collection highlighted by the workshops' participants included an ability to:

- better understand the impact of proximity/availability of green/blue spaces and their actual use and impact on mental health;
- better understand inequalities and different environmental exposures and their impact on sleep, work, marriage dissolution, mental health, household relationships (and to build a more holistic social-ecological model of sleep);
- exploit the longitudinal element of the data collection to answer questions around mediating effect of i.e. sleep on outcomes (i.e. recovery from different events);
- explore questions around working patterns, working conditions and ability to use local green/blue/recreational spaces;
- explore methodological questions including validation of self-reports;
- use machine learning techniques to try to predict outcomes;
- explore engagement of different subgroups into creating racial and socio-economic segregation in the local area (spatial patterning of local area use);
- and understand people's mobility patterns and transport use over time.