

Principal Investigator

Dr Chinmoy Sarkar

Address

University of Hong Kong, Faculty of Architecture, Knowles Building, 4th
Floor, Pokfulam Road, Hong Kong

Summary of research

Key words: Physical activity, obesity, mental health, built environment,
morphometrics

We propose to conduct a series of preliminary analyses into associations between various attributes of the built environment and lifestyle, after adjusting for a range of individual-level covariates including prevalent disease. At this stage, our spatial area of interest cover the eight UKB centres; for which all spatial modelling has been completed and submitted to UK Biobank. More specifically, we will assess the health-promoting/inhibiting effects of the built environment on diet, smoking, alcohol consumption, physical activity, obesity and mental health through a series of statistical analyses. This proposal will not involve re-contact of participants or access to biological samples.

Analyses will be conducted into health and the environment. These analyses will be some of the most detailed conducted in this area to-date. Furthermore, the project will also allow the development of statistical models that maybe applied to the full UKB dataset in due course.

Development of a series of statistical models to find associations between attributes of built environment (objectively assessed through a series of morphological metrics - morphometrics) and individual level lifestyle including diet, smoking, alcohol consumption, physical activity, obesity and mental health.

Participants from the UKB centres of Cardiff, Swansea and Wrexham, BARTS, Croydon, Hounslow, Leeds and Sheffield (N=164,234)

PROJECT SCOPE, TIMELINE EXTENSION AND ADDITIONAL DATA - APPROVED
13/11/2017

The new variables which I wish to model, create and link for additional studies as a part of this application 11730 are described as follows:

- a) Creating measures of neighbourhood wealth and dwellings-level property price within UKBUMP.
- b) Creating new measures of physical building conditions and energy consumption within UKBUMP.
- c) For a subset of UK Biobank participants followed-up (Repeat Assessment visit 2012-2013 and Imaging visit 2014+), we will want to create new UKBUMP metrics to be able to do studies on change in health vs. change in built environment for a subset of population.

We require participant dwelling addresses and geo-coordinates over time (X, Y British coordinate system) to be able to model the built environment metrics around the geocoded dwelling locations as has been done in baseline (as a part of our internal collaboration, which used full address at baseline to obtain as accurate measures as possible).