

Linking data on proximity to fast foods to the Millennium Cohort Study

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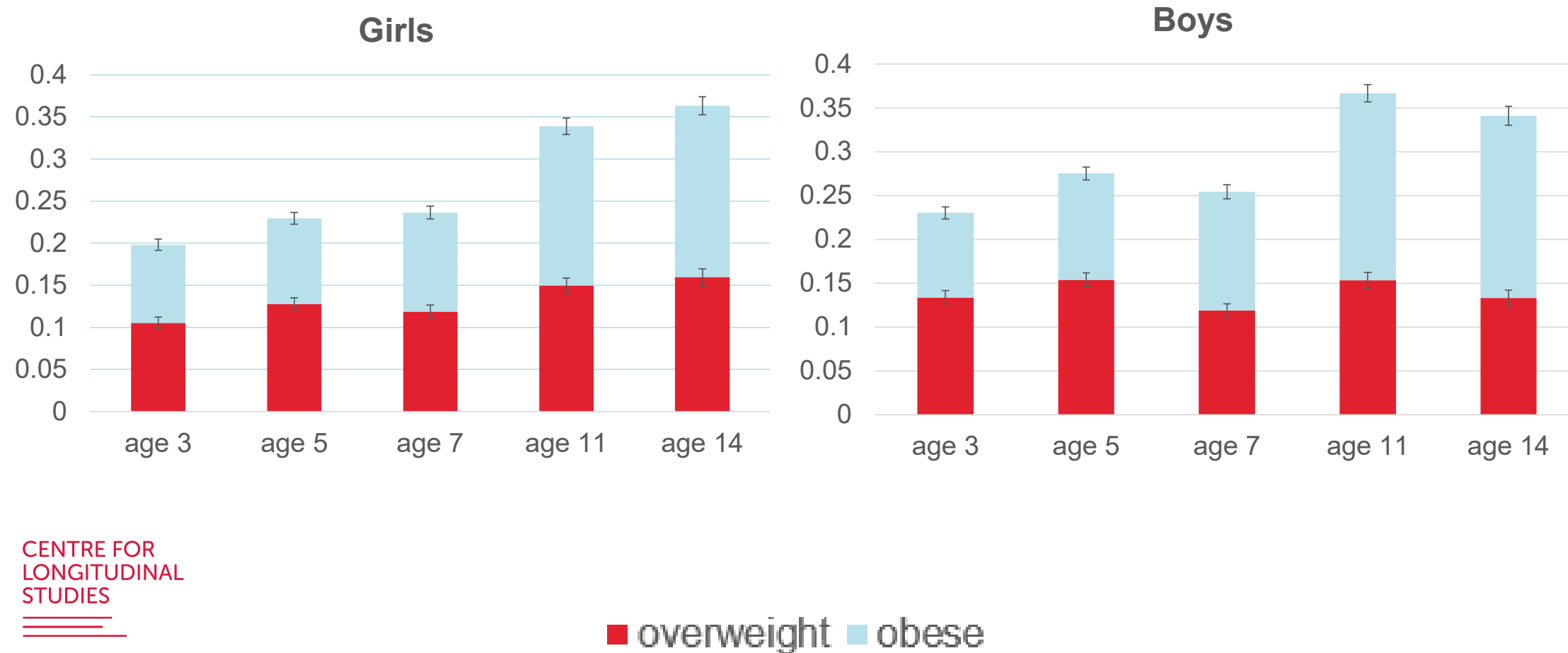
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CENTRE FOR
LONGITUDINAL
STUDIES



Excess weight in childhood and adolescence, by gender



Fast foods

- Fast food outlets – incl. chip shops, burger bars and pizza places – account for more than a quarter (26%) of all eateries in England
- 34% increase in fast food outlets from 2010 to 2018 in the UK
- England's poorest areas have 5 times more fast food outlets than the most affluent

Research Question: does proximity to fast food restaurants affect childhood obesity rates?

Challenge - associations between the two may reflect socioeconomic deprivation rather than the presence of fast food outlets

Most papers based on cross-sectional data, or v local/small scale studies - must be interpreted cautiously ...

Takeaway clampdowns 'may combat obesity epidemic'

By Helen Briggs
BBC News

🕒 14 March 2014



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According to the study, the average person encounters 32 takeaway restaurants between home and work

Restricting the number of fast-food outlets around offices and homes could help combat the obesity epidemic, UK researchers say.

Opportunities - Data

Very detailed geo data on availability of fast food outlets across Great Britain:

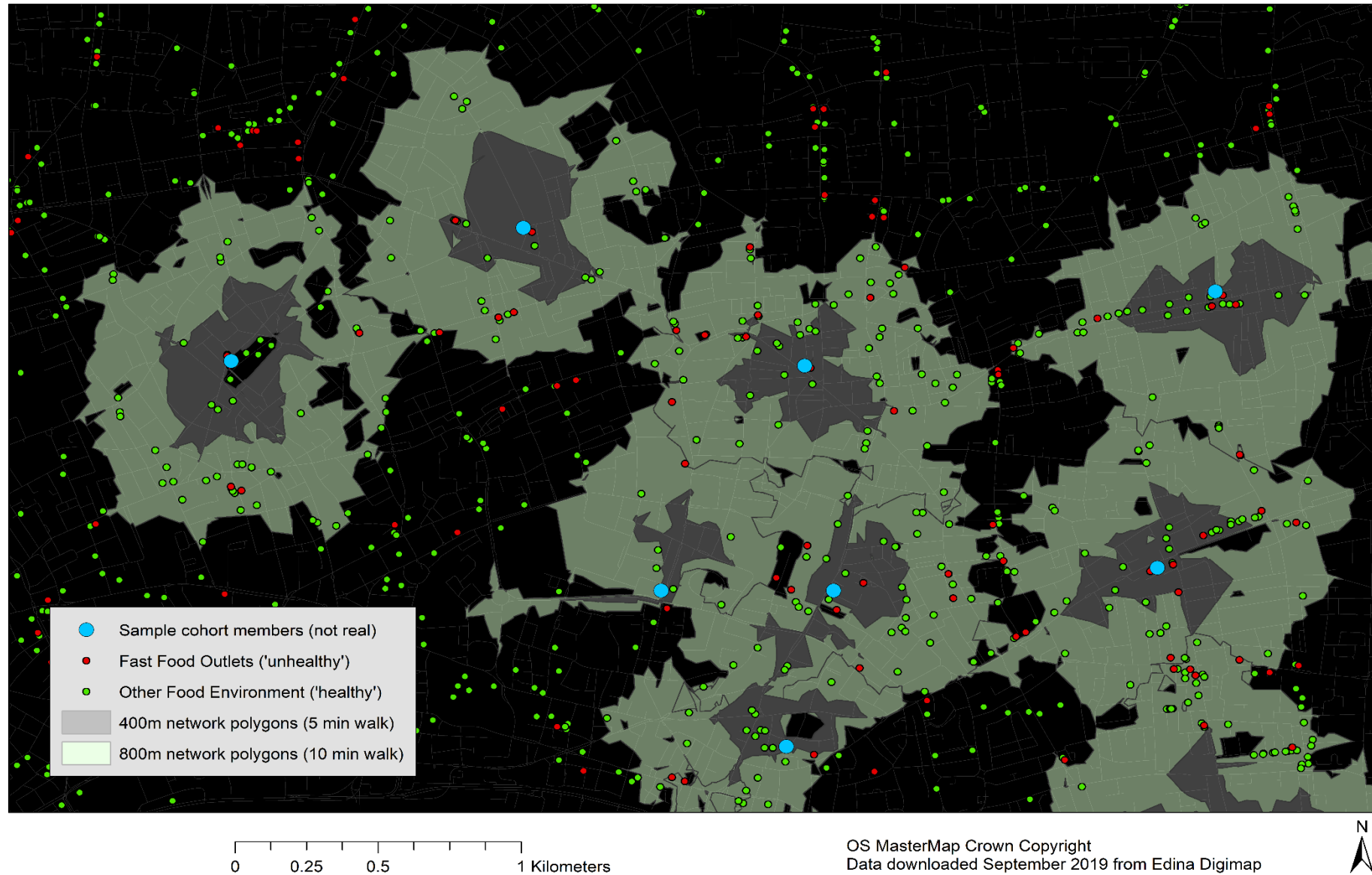
- **OS 'Points of Interest'** - 4 million+ commercial and public (non-residential) organisations - over 600 categories including fast food, supermarkets, green food stores etc. (2005 -)
- **OS 'MasterMap'** - including road networks, building polygons, aerial photography and building heights (enabling 3D analysis) datasets (1997 -)
- Millennium Cohort Study - BMI measures over time throughout childhood/adolescence, plus rich data on children's backgrounds from birth

What we do

- We use **OS Points of Interest** data to classify eateries into whether they are fast food or not
- For each cohort member, we use **road network data** from **OS 'MasterMap'** to calculate 400m/800m/1600m buffers around their home and school postcodes
- We combine this to calculate the number of fast food outlets around each cohort member's home and school postcodes – at ages 7, 11, 14

What we do

Using Ordnance Survey data to map the local food environments of MCS cohort members



Challenges – Classification & changes over time

Classification of eateries into whether they are fast food or not

Points of Interest data - change in number of records for selected categories, 2005 - 2017

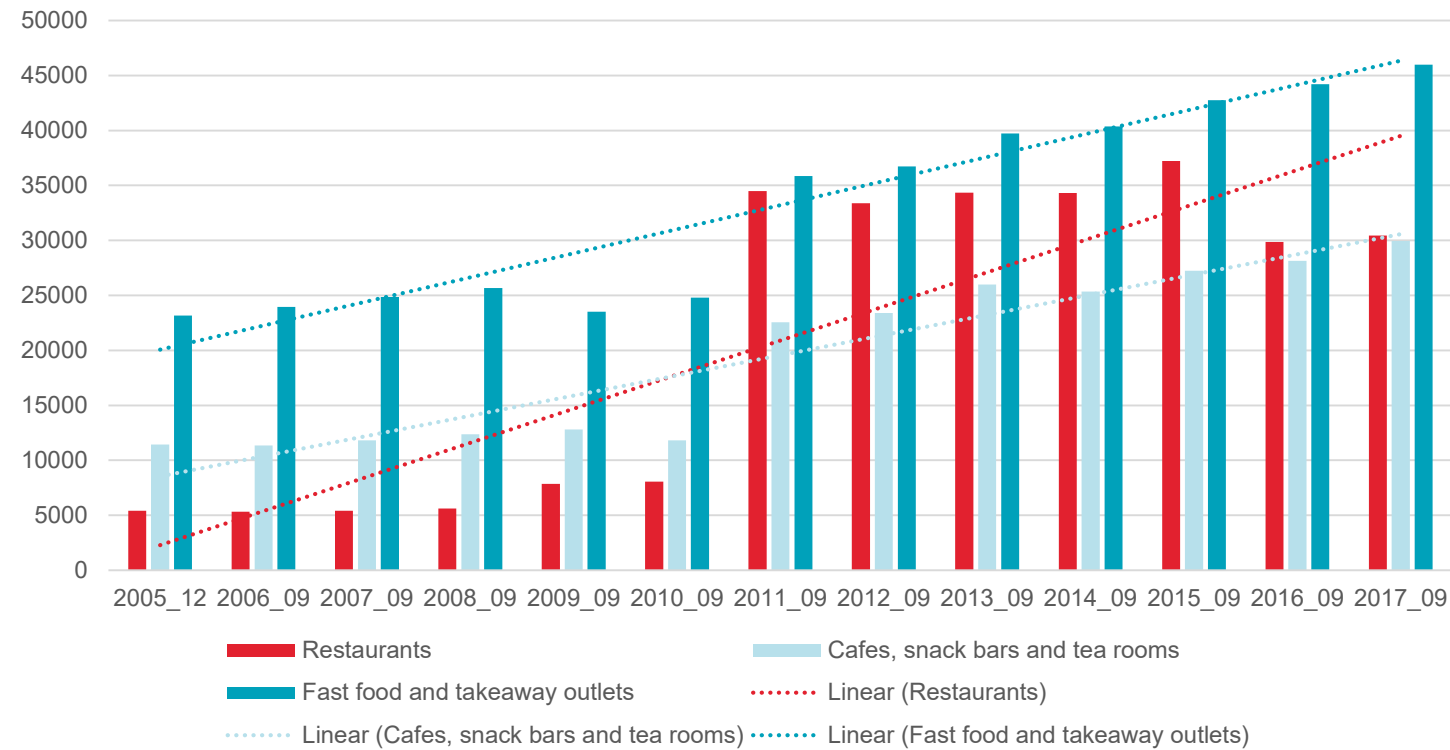


Illustration of distance errors between building centroids and geometric unit postcode centroids

Challenges
- postcodes
v addresses

