

## Children and young people

OP11

**#URBAN LANDSCAPES, MOBILITY AND ENVIRONMENTAL EXPOSURE: A PROSPECTIVE NATIONALLY REPRESENTATIVE STUDY OF CHILDREN AGED 10/11 YEARS, SCOTLAND, UK**

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**Background** The environment in which we live, travel and socialise has a profound influence on health. Existing literature typically uses a fixed 'neighbourhood' as the unit of analysis – assuming often that people conduct their lives within that spatially defined unit. The aim of this study is to describe urban mobility and environmental exposure across an entire urban landscape.

**Methods** Using the 'Studying Physical Activity in Children's Environments across Scotland' (SPACES) study, we developed a novel concept to construct a model of the entire urban landscape within the Central Belt of Scotland. The model used a 25 m<sup>2</sup> grid system (~3 million GRID squares). For each cell, there was detailed built-environment information, including characteristics of the road network, retail outlets, greenspace, and walkability measures. SPACES used GPS to collect individual-level mobility information for 100 10-year-old children over the course of one week. Each child's location was recorded every 10 seconds during waking hours and that data was joined to the urban landscape model. The result was a comprehensive dataset describing of whether and when each child visited each grid cell, how long they spent there, and what the location comprised. Using negative binomial regression, we explored which features of the built environment were associated with the child visiting that space at all, and with time spent there, and examined whether this differed by the sociodemographic characteristics of the child.

**Results** We found land-uses across the urban landscape that were predictive of children spending time, such as: libraries ((coef) 2.0, 95% CI 1.0 to 3.0) and places of worship (1.8, 95% CI 1.2 to 2.5), and a linear relationship between increased walkability of a cell and a greater time spent there. Cells containing playing fields, public parks and play parks were predictive of children spending time, independently of proximity to their home. For most land-uses there were no differences by gender, except for leisure centres where girls spent more time than boys (4.0, 95% CI 1.0 to 7.0).

**Conclusion** We created 'personalised activity spaces' which simultaneously assessed all the types of environment children could and did visit. The study found features of the urban landscape that, regardless of distance from home, children were more or less likely to spend time in. The ability to consider how children use their urban area, and the multiple environments they are exposed to, is a significant step towards understanding the urban environment as a complex system.

OP12

**A POPULATION APPROACH TO THE HEALTH AND FUTURE PROSPECTS OF YOUNG CARERS IN GLASGOW**

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**Background** There is a lack of public health evidence on the impacts of being a young carer, with most evidence based on studies involving already identified carers. Young carers tend to have poorer health, education and employment outcomes compared with their peers. They are also more likely to live in areas with higher deprivation levels, and with a lone parent or adult(s) with long-term health conditions, all of which are disproportionately present in Glasgow.

From April this year, local authorities and health boards across Scotland will be required to offer a 'young carers' statement, as stipulated by the Carers Act (2016).

Using data from a schools survey (age range 11–18) in Glasgow, the research aimed to take a population approach to young carer research, specifically to:

- Investigate the prevalence of young carers
- Explore differences in their health, wellbeing and future expectations.

**Methods** Secondary analysis of the 2014 NHS Greater Glasgow & Clyde health and wellbeing secondary school survey was undertaken (n=11,215). Pupils with caring responsibilities were identified. Their outcomes in terms of physical and mental health, and post-school expectations were analysed, using three-stage complete case regression analysis in SPSS.

**Results** Almost one in eight (12%) surveyed reported caring for someone in the household. Almost a third (30.9%) stated that no-one knew about it. Over half cared for someone with a disability, a third for someone with a long-term condition, almost a quarter for someone with a mental health problem, and just over a tenth for someone with a drug or alcohol problem.

Over and above background factors and presence of illness in the household, young carers physical and mental health outcomes were significantly poorer, particularly for those caring for a person with mental health or addictions issues. They were significantly less likely to see themselves entering further or higher education.

**Discussion** This research suggests that Glasgow could have many more young carers than previously thought, and provides clear evidence that young people's outcomes are influenced by carer status. Possible explanations for under-identification include stigma, fear of intervention and not identifying with the 'carer' role.

In April, the implementation of new Scottish legislation will place a duty on public services to identify and support young carers. This could present future service challenges, in particular, ensuring that young people feel comfortable enough to disclose their carer status, and that effective support measures contribute towards improving their health outcomes and future prospects.