is a common challenge. The aim of this study is to understand the reasons for the patterns of uptake of multifactorial fall risk assessment clinics in the community.

Methods A convergent mixed methods study design was used. Data on attendance/non-attendance during the first 12 months at each clinic (n=4) were extracted from a centralised administrative database. Semi-structured interviews (n=16) were conducted with a purposive sample of people who attended a clinic (criteria: male/female, age: 55–69, 70–79, 80+, and clinic), selected from those who had opted in during a preceding service-user experience survey. Administrative data were analysed descriptively using STATA (v13) software. Thematic analysis was performed and themes were mapped onto the Theoretical Domains Framework (TDF). Data were merged during analysis and interpretation using qualitative themes to expand on the patterns emerging in the quantitative data.

Results Of the 588 older adults invited, 484 attended the assessment which resulted in an uptake rate of 82.3% (range: 77.5–86.1). Reasons for attending were summarised into themes which mapped onto 10 theoretical domains. Key themes identified were *always attending medical appointments and adhering to medical advice* (social/professional role and identity), *having a positive attitude towards health services* (optimism), *being linked in with health professionals and community services* (environmental context and resources) and *having strong social support from family and friends* (social influences). Other themes included *understanding what the clinic was about* (knowledge), *having a fear of falling* (emotion), supposing the benefits of attending (beliefs about consequences) and *wanting to prevent further falls* (goals).

Conclusion The results suggest older people attend fall prevention services if they have existing (positive) links to health services and are well supported in their homes and communities. To improve the spread of fall prevention programmes, there is a need to reach older adults who are less well supported.

Poster presentations

P1 URBAN LANDSCAPES, CITY DIVERSITY AND QUALITY OF LIFE: AN OBJECTIVE CROSS-SECTIONAL STUDY OF 66 EUROPEAN CITIES

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Background With more than half the world's population residing in urban areas and this proportion rising, it is important to understand how urban environment might create happier and healthier populations. Most studies consider the influence of single environmental characteristics, often comparing small numbers of cities. In this novel international study, we applied methods from ecology to assess 66 entire European cities as 'urban landscapes'. We explored relationships between objective measures of the cities' land cover and structure, and residents' reported satisfaction with their life and city. We then assessed whether city landscape characteristics were related to within-city socio-economic inequality in life satisfaction.

Methods Respondents to the European Urban Audit (EUA) report their satisfaction with: life; the city they live in; and the place they live, as well as socio-demographic

characteristics. The European Urban Atlas provides satellite-derived land use data for these cities. The Atlas has a 10 m² resolution and categorises land into 26 classes including, for example, industrial sites, transport infrastructure, and different kinds of natural space. The proportion of each city's land area falling within each class, together with metrics quantifying the distribution, balance and spatial arrangement of different land uses, were derived and joined to the EUA (n=~63 000 individuals, within 66 cities). Mixed binary logistic analysis sought associations between life satisfaction measures and the land use measures and metrics. Then, associations between a city-level slope index of socio-economic inequality in satisfaction and the landscape metrics were explored using ANCOVA.

Results Specific land use measures were associated with all of the satisfaction measures: the residential proportion of a city (OR: 0.980–0.990, p<0.05); continuous urban fabric (OR: 0.995–0.998, p<0.03); isolated structures (OR: 1.045–1.097, p<0.05); other roads and associated land (OR: 0.967–0.989, p<0.04); pastures (OR: 1.003–1.007, p<0.02) and herbaceous vegetation (OR: 0.990–0.998, p<0.03). No associations were found with the landscape metrics. More diverse landscapes (β : -0.125 – -0.305, p<0.001), and those with more even distributions of land uses (β : 0.397 – -1.054, p<0.001), were both associated with lower inequality in life satisfaction.

Conclusion The content and form of a whole city may influence how residents feel about their lives. Cities which have a diverse range of land use, and which have a more equal balance in land seem also to enjoy lower levels of socio-economic inequality in life satisfaction. These findings may aid urban planners to develop and build cities that can contribute to improving population life satisfaction and narrowing inequalities.

P2 WHAT FACTORS PREDICT PARTICIPATION IN A MASS COMMUNITY PHYSICAL ACTIVITY PROGRAMME? THE CASE OF THE FIVE SHEFFIELD 'PARKRUNS'

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Background Community-based 5 kilometre running/walking events known as 'parkruns', organised by volunteers using web based infrastructure maintained by a national charity, are a rapidly growing international phenomenon. Every Saturday morning over 100 000 people take part in a 'parkrun' in the UK, with 1200 participating each week in the city of Sheffield. Despite increasing support for events to be set up in public parks in more deprived neighbourhoods, individuals living in less affluent areas are less likely to participate. Better understanding is needed of what makes events accessible and attractive to those from poorer neighbourhoods if there is to be a positive impact on inequalities in physical activity and associated wellbeing. This study explored differences in participation and factors that affect participation across the five Sheffield parkrun events.

Methods We collected qualitative and quantitative information from routine data sources, from the event websites and from social media and pairs of researchers conducted structured observations at each of five events at different locations across

the city. The routine information on participation was used to compare the characteristics of participants for the five events. The qualitative findings were analysed thematically to identify similarities and differences between the different events which might explain significant differences in numbers and characteristics of participants across the five different events.

Results Index of multiple deprivation was the main predictor of attendance numbers, with weekly attendance varying from 584 (most affluent location) to 63 (most deprived location). Men outnumbered women (57% vs 43%) and ethnic diversity was low across all events. Significant differences in participant experience were observed between the larger and smaller events in terms of the competitive ethos, degree of anonymity, sense of community and social engagement. There appeared to be a trade-off with larger events offering anonymity and a spirit of competition, whilst smaller events seemed to encourage a more supportive and friendly social experience for participants.

Conclusion Patterns of participation suggest that mass weekly community events of this nature are, whilst likely to provide health benefits to the population as a whole, also likely to be responsible for significant intervention generated inequalities in uptake of opportunities for physically active recreation. Current efforts to increase access to opportunities for physical activity in deprived communities may need to consider carefully how to identify effective ways to attract more participants whilst preserving the perceived benefits of smaller events that promote community ownership and engagement.

P3 AREA DEPRIVATION MEASURES IN BRAZIL: A SCOPING REVIEW

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Background Brazil is a country with high rates of inequality. Although overall poverty rates have declined and global measures of socioeconomic conditions have shown consistent improvements in recent decades, internal disparities remain substantial. Area-based deprivation indices are important for understanding social inequalities. The purpose of this review is to inform the development of a small area deprivation index for Brazil, describing and assessing currently used area based measures of socioeconomic inequalities in Brazil for health research.

Methods We searched five electronic databases and seven websites of Brazilian research institutions and governmental agencies. Inclusion criteria were multiple measures of deprivation, small areas (i.e. finer geography than country-level) in Brazil. Studies had to be published in English, Portuguese or Spanish. We extracted data on study characteristics, name of the deprivation measure, area level, geographical coverage, variables used to calculate the index and whether it was used to report a health outcome. Results were tabulated according to the area-level used and dimensions of deprivation or poverty included in the measures. We used a narrative synthesis approach to summarise the different deprivation measures

available, highlighting their strengths and weaknesses for application to public health research.

Results A total of 7199 records were retrieved, 126 full text articles were assessed using the inclusion criteria and a final list of 30 articles were selected. Most of the studies were excluded as they did not focus on area level measurements (n=69). We identified no small area deprivation measures that have been applied to the whole of Brazil. Three studies did cover the entire country of Brazil but the 'small areas' used were municipalities with an average population of 37 000. We found limited deprivation measures using the census tract area level and few measures using the most recent 2010 Census. Papers were grouped into six dimensions: income, education, sanitation, household conditions, ethnicity and others. These measures were mainly used to study infectious and parasitic diseases. Few studies used the measures to assess inequalities in mortality and no studies used the deprivation measure to evaluate the impact of social programs.

Conclusion Currently there is no up-to-date small area-based deprivation measure that covers the whole of Brazil. Area-based deprivation indicators have been in use in the UK and other countries for over 30 years. There is a need to develop a similar small-area deprivation index for Brazil that can be used to measure and monitor inequalities in health and mortality.

P4 COMMUNITY FOOD PRODUCTION IN SMALL ISLAND DEVELOPING STATES: A SYSTEMATIC SCOPING REVIEW OF HEALTH, SOCIAL, ECONOMIC AND ENVIRONMENTAL IMPACTS

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Background Small island developing states (SIDS) have some of the highest rates globally of obesity, diabetes and related non-communicable diseases. A diet of energy dense and highly processed foods over fruit, vegetables and fibre is a major determinant of this burden. The majority of SIDS lack food sovereignty, are vulnerable to food insecurity and rely heavily on food imports. The need to increase local food production, particularly of non- or minimally processed foods, is seen as a pre-requisite to effective long term NCD prevention. This research aimed to explore what is known on community-based food production initiatives (CFPIs) in SIDS, including their number and distribution, characteristics, and their positive and negative impacts on health, social and economic wellbeing and the environment.

Methods A systematic scoping review was undertaken to identify literature from a range of disciplines. We searched 12 electronic databases for articles published in the last 20 years which concerned local food production initiatives in SIDS. In total, 8215 articles were screened and data abstracted for 153 eligible articles by two independent reviewers and verified by a third. Articles were included if they were set in one of 57 SIDS countries and reported health, social, economic or environmental impacts of or on CFPIs. Data abstraction and analysis focused on geographical location, type of CFPI,