

Objective Examine relationships between neighbourhood-level and individual-level characteristics and physical activity.

Setting 40 of the most deprived neighbourhoods in London (census lower super output areas (LSOA) ranked in the top 11% of LSOAs in London by Index of Multiple Deprivation).

Design Cross-sectional, interviewer-administered survey with households in the 40 neighbourhoods (n=4107 adults aged ≥ 16 years); fieldworker-completed neighbourhood audit tool to measure area characteristics.

Methods Physical activity was measured using the International Physical Activity Questionnaire in the household survey. The outcome measure was meeting the minimum recommended levels of physical activity (5 x 30 min moderate activity per week). Multilevel modelling in Stata 11 was used to examine the effects of individual and neighbourhood characteristics on achieving the recommended weekly physical activity levels. Multiple imputation was used to account for missing data.

Results 70% of respondents reported physical activity equivalent to the recommended 5x30 min per week; the intra-neighbourhood correlation coefficient was 0.15. Preliminary results (adjusted for socio-demographic characteristics) indicate that women were less likely than men to meet the recommended physical activity levels (OR=0.6; 95% CI 0.4 to 0.7); individuals with positive mental health were more likely to meet the recommended levels (OR for 1 point increase in Hope Scale=1.2; 95% CI 1.0 to 1.3). After adjusting for individual characteristics, 9% of the residual variance in propensity to meet recommended physical activity was attributable to neighbourhood differences. Neighbourhood levels of incivilities, proximity and quality of parks/green space, walkability and cyclability were not associated with meeting recommended physical activity levels. Further results for other neighbourhood characteristics will be presented and social inequalities in the effects of neighbourhoods on health will be examined.

Conclusion The level of physical activity in low income communities in London is higher than the national average measured in the Health Survey for England. In preliminary analyses we found no evidence of neighbourhood effects on physical activity levels in deprived London neighbourhoods. These observations may be due to: (i) limited clustering of physical activity levels across the most deprived neighbourhoods in London; (ii) limited variability in neighbourhood environments in these communities; (iii) individual level characteristics are stronger determinants of physical activity in these communities; (iv) complex and contingent causal pathways of physical activity, not captured in our models.

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DETERMINANTS OF PHYSICAL ACTIVITY IN DEPRIVED COMMUNITIES IN LONDON: EXAMINING THE EFFECTS OF INDIVIDUAL AND NEIGHBOURHOOD CHARACTERISTICS

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Background The benefits of regular physical activity are well known. Few adults in the UK meet the recommended levels. There is growing evidence suggesting that neighbourhood characteristics interact with individual characteristics to determine physical activity levels.