Physical Activity

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Background Both physical activity levels and dietary behaviours have consistently been linked with the development of chronic disease, obesity and ill-health in both adult and youth samples. Nationally there are established recommendations of minimum levels of physical activity and fruit and vegetable consumption necessary to promote good health. Developing healthy behaviour is particularly important for young people, as adult behaviours that are detrimental or positive for health and well-being are often established in childhood and adolescence. This paper aims to investigate the prevalence of physical activity and fruit and vegetable consumption and to explore the co-occurrence of these behaviours among young people in the UK, using the newly available *Understanding Society* study.
Methods This study is part of an ongoing secondary analysis of *Understanding Society: The UK Household Longitudinal Study*. The analysis sample consisted of 4,395 young people aged 10 - 15 living in the UK in 2009/2010 who participated in the first wave of the study. The prevalence of physical activity and fruit and vegetable consumption within the sample, and patterns of co-occurrence across the two behaviours, were explored descriptively. Multinomial regression models were estimated to investigate the social patterning of the health behaviour co-occurrence patterns, using socio-demographic characteristics of the young person and mother.
Results 85.2% of young people did not meet the government recommendation for fruit and vegetable consumption, reporting less than 5 portions of fruit and vegetable daily. 70.6% of young people did not meet the recommendation for participation in daily physical activity. A small minority did not consume any fruits and vegetables (5.0%); and 6.4% reported participating in physical activity less often than weekly. On examining the patterns across combinations of the two behaviours, most young people did not meet both recommendations (62%), while only 6.1% of young people met both recommendations. Multinomial regression models indicated that gender, ethnicity and religion and socio-economic status were significantly associated with health behaviour patterns.
Conclusion This paper presents an analysis of the most recently available health-risk behaviour data on children from all four countries of the UK. The results indicate that a high proportion of young people do not achieve levels of fruit and vegetable consumption or levels of participation in physical activity considered to be a minimum for good health, and these two behaviours tend to co-occur. The implications of these behaviour patterns and the associations with socio-demographic characteristics are discussed.

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Background Sedentary behaviour (sitting) is an emerging cardio-metabolic risk factor in young people. Little is known about how household socioeconomic position (SEP) and sedentary behaviour are associated in children and adolescents. The aim of this study was to assess the associations between SEP (including area-level deprivation) and sedentary behaviour in school-age children and adolescents.
Methods The study sample was 4034 participants aged 5–15 yrs participated in the 2008 Health Survey for England which collected information on SEP (household income, Registrar General's social class of the household reference person) and neighbourhood deprivation. Sedentary behaviour assessment (proxy parental measures for 5–12yrs; self-reported for 13–15yrs) included television viewing and other sitting during non-school times. Total sitting time was measured in a sub-sample (N=611) using accelerometers. We examined the multivariable associations between each SEP indicator and each sedentary time indicator using generalised linear models. Whenever appropriate, models were adjusted for age, sex, body mass index (BMI), physical activity, accelerometer wear time and mutually adjusted for the other SEP indicators.
Results The mean age of the sample was 10 yrs (±3), 2922 participants were aged 5–12 and 1112 were aged 13- 15yrs. Household income and social class were inversely associated with daily television times (i.e. the higher the SEP the lower the television viewing times), e.g. compared to participants from households in the bottom income quartile, those in the top quartile had 14 minutes /day less (95% CI: 3 to 25, p=0.009) of television viewing. Non-TV sitting during non-school time was higher in nonmanual than in manual social class households by 14 minutes/day (7 to 20, p<0.001). Total (accelerometry-assessed) sitting time was higher among participants from households in the top income half (≥£23135/year) by 22 minutes/day (7 to 37, p<0.00) compared to those in the bottom half. Area deprivation was not associated with sedentary behaviour.
Conclusion Low socioeconomic position is linked with higher television times but with lower total (accelerometry-assessed) sitting, and non-TV sitting during non-school time in children and adolescents. Inferences from studies looking at socioeconomic position and specific indices of sedentary behaviour (e.g., TV time) in children and adolescents may not be generalizable to total sitting time.

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Background Neighbourhood deprivation is associated with physical activity but it is not known whether the locations where physical activity takes place also varies by deprivation. The Forty Area Study (FAST) combined Global Positioning Systems (GPS) technology with accelerometery in UK adults to measure actual locations in which physical activity takes place. We evaluate what proportion of moderate to vigorous intensity physical activity (MVPA) is spent in different locations according to neighbourhood deprivation.
Methods 1084 adults from Northwest England took part. Each participant's activity levels were recorded for 7 days using an accelerometer. A quarter of our participants also wore a GPS device. The accelerometer and GPS data were integrated into a Geographical Information System (GIS) containing information on the participants' home locations and the locations where physical activity was recorded. We then examined the land uses where participants undertook their MVPA.