

Exploring the Relationship Between Prevalence of Overweight and Obesity in 10-11 Year Olds and the Outdoor Physical Environment in North East England 2015

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Abstract

Childhood overweight and obesity have been at the forefront of the public health agenda for a decade. Within this time a paradigm shift within medical and social sciences has altered the focus on personal determinants of obesity towards environmental and societal level influences. The neighbourhood environment is implicated in health, encompassing all aspects of the energy balance equation (ie, physical activity (PA), diet and weight). Relatively little is known about neighbourhood-level health associations in young people, particularly within the UK. At the heart of the thesis is the Children's Neighbourhood Environment Study (CNES) which aimed to identify physical environment correlates and mediating factors of PA and dietary intake behaviours and resultant weight outcomes in young people (10-11 years) within the North East of England.

In response to persistent recommendations in obesogenic environment literature CNES applied a cross-disciplinary mixed-methods approach to research. This comprised: focus groups, participant-reported PA and dietary behaviours, participant and parent reported neighbourhood environment perceptions, objective (utilising a GIS-based approach) and subjective neighbourhood environment measurement and appraisal.

Youth PA showed statistically significant *positive* association with park and green space access, total street length and total road length but *inverse* association with mixed land use; associations with other neighbourhood features did not reach statistical significance. Dietary intake showed *no* statistically significant association with the neighbourhood environment. Elevated weight status showed statistically significant *positive* association with mixed land use and the absence of cycling facilities; associations with other neighbourhood features did not reach statistical significance.

CNES adopted a robust and comprehensive cross-disciplinary approach, the first study of its kind in the UK. It implicates the neighbourhood environment in enabling and disabling PA behaviours and weight outcomes in young people. CNES has successfully identified strategic areas to target public health intervention and inform urban planning to facilitate health.