however, that shorter sleep duration was associated with greater lean and bone mass suggesting that the relationship between sleep and BMI is not determined by an effect on adiposity alone.

OP66 MULTILEVEL INFLUENCES ON OVERWEIGHT AND OBESITY IN 8–11 YEAR OLD IRISH CHILDREN: FINDINGS FROM THE CORK CHILDREN'S LIFESTYLE STUDY (CCLAS)

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Background Globally, the high prevalence of childhood obesity is recognised as a significant public health problem associated with adverse health consequences. Thus, a comprehensive understanding of this multifaceted problem is necessary to inform effective public health strategies. We aim to assess modifiable individual factors associated with childhood overweight and obesity whilst considering broader contextual factors including the home and local environment

Methods CCLaS is a cross sectional survey of 1075 children aged 8–11 years in Cork, Ireland. Schools were recruited from Cork City using probability proportionate to size sampling. Complete sampling recruited schools from one rural area of Cork County. Child height and weight were measured by trained researchers using standard methods. International Obesity Taskforce definitions for body mass index were used to define obesity. Children wore wrist-worn Geneactiv accelerometers for 7 days and raw accelerometer data was used to categorise moderate-to-vigorous physical activity (MVPA). Information on diet and lifestyle were reported separately by children (local playground facilities, neighbourhood safety), parents (child sleep, screen time, child and family eating patterns, self-reported parent height and weight, parent education) and principals (school environment) in questionnaires. Age and sex adjusted logistic regression was conducted for each independent variable, whilst accounting for the clustering of children within schools. All significant variables were then included in a multivariate logistic regression.

Results The prevalence of overweight was 20.0% (95% CI 17.6–22.4) and obesity 5.3% (95% CI 4.0–6.7), with more girls overweight or obese than boys (p = 0.1). The age and sex adjusted regression models indicated that inadequate sleep time, total screen time, not meeting 60 min MVPA/day, skipping breakfast, no fruit consumption, high family consumption of takeaway food, lower levels of maternal education and maternal overweight/obesity were all associated with a significantly increased odds of childhood overweight/obesity. School disadvantaged status, local playground facilities and neighbourhood safety did not significantly increase the odds of overweight/obesity. In the fully adjusted model, inadequate sleep time (OR 2.2, 95% CI 1.4–3.5), not meeting 60 minutes MVPA/day (OR 2.2, 95% CI 1.5–3.2), lower levels of maternal education and maternal overweight/obesity (OR 2.1, 95% CI 1.4–3.0) remained statistically significant.

Conclusion Individual and family factors appear most strongly associated with childhood overweight/obesity in Ireland. However, from a public health perspective targeting change at an environmental level may be the most effective means of providing population based obesity interventions. Better measures on wider contextual social, economic and cultural factors are needed to better understand multilevel influences on obesity.

OP67 THE CHANGING FOOD ENVIRONMENT AND AREA LEVEL DEPRIVATION: AN OBSERVATIONAL STUDY OF TAKEAWAY OUTLET AND SUPERMARKET EXPOSURE IN NORFOLK, 1990–2008

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Background Although previous studies have revealed an association between takeaway prevalence and deprivation, few UK-based studies have investigated associations between deprivation and both healthy and unhealthy outlets or trends in prevalence over time. Given increasing policy interest in food environments it is important to examine long term trends by level of deprivation. This study examined takeaway and supermarket prevalence by area-level deprivation in Norfolk during 1990–2008.

Methods We recorded food outlet data from Yellow Pages directories over six time points from 1990 to 2008. We geocoded and mapped addresses onto 2001 electoral ward boundaries. We classified 'Supermarkets' and 'Takeaways' using a priori definitions based on market share and planning regulations. We population-standardised outlet counts using the 2001 Census and assigned wards to deprivation tertiles using the 2001 Townsend Index. We used repeated measures ANOVA to test differences in takeaway density over time and multilevel logistic regression to test the interaction between deprivation tertile and time in the presence of supermarkets.

Results Mean takeaway prevalence increased from 2.6 per 10,000 residents in 1990 to 3.7 in 2008. Supermarket prevalence increased from 0.2 to 0.3 per 10,000 residents over this time. Takeaway prevalence was significantly greater in the most deprived tertile throughout the period: in 2008 there were 2.1 (SD=4.3) outlets in the least deprived tertile, 2.7 (SD=5.7) in the middle tertile, and 6.5 (SD=7.6) in the most deprived. Takeaway prevalence increased significantly ($F=12.8$, $p < 0.001$), but there was no interaction between deprivation and time ($F=1.7$, $p = 0.11$). There was no significant association between deprivation and the odds of supermarket presence and no significant interaction between deprivation tertile and year.

Conclusion We found a greater prevalence of takeaway outlets in more deprived wards than less deprived wards. However, we found no difference in the odds of a supermarket being present. Over time there was an increase in both the prevalence of supermarkets and takeaways but this did not differ by deprivation. This is the first UK study to assess the local food environment in relation to area deprivation over time. Future work needs to assess a broader range of outlets to better capture the food environment and determine the extent to which exposure affects dietary behaviours.

OP68 HOW IS OVERWEIGHT/OBESITY ACROSS THE LIFE COURSE ASSOCIATED WITH LEVELS OF ADIPOKINES, INFLAMMATORY AND ENDOTHELIAL MARKERS AT AGE 60–64 YEARS? FINDINGS FROM THE 1946 BIRTH COHORT

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