Dietary and lifestyle predictors of 'healthy eating' in Irish children

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It is widely recognised that dietary factors play an important role in the development of chronic diseases[1–3]. Following a larger ILSI Europe project[4,5], the aim of the present study was to identify dietary and lifestyle patterns in relation to healthy eating in Irish children by determining an Irish reference population of children with 'healthy diets' and identifying 'reference foods' positively or negatively associated with a 'healthy diet' and then finally examining the influence of several different dietary, socio-demographic, health and lifestyle and behavioural factors on the healthiness of the diets of Irish children.

Food consumption was estimated using a 7 d weighed-food diary for a random representative sample of 594 children aged 5–12 years from the National Children's Food Survey[6]. Anthropometric measurements were collected and questionnaires provided information on socio-demographics, health and lifestyle, eating behaviour and attitudinal data for both children and their parents or guardians[6]. The 'reference population' with healthy diets was determined using several different criteria: the 33rd percentile of total fat (% energy; %EN), saturated fat (%EN), non-milk extrinsic sugars (%EN) and salt (g/d) intake and the 66th percentile of carbohydrate (%EN), fibre (g/d) and fruit and vegetable (servings per d) intake. For each criterion a score of achievement (between 0% and 100%) was determined by the nutrient intake:respective reference intake. A global score (healthy eating index) was calculated as the sum of the scores for each of the different criteria. Tertiles of the healthy eating index were formed. The reference population with 'healthy diets' was the subgroup in the third tertile. To determine the 'reference foods', sixty-eight food groups were used. These foods were characterised into having a positive (foods consumed significantly more by those with 'healthy diets' compared with 'unhealthy diets'), negative (foods consumed significantly less by those with 'healthy diets' compared with 'unhealthy diets') or no association with a healthy diet. To compare the mean intakes of the first and third tertiles the Wilcoxon Mann-Whitney test was used. Binary logistic regression was used to examine the predictive influence of different dietary, socio-demographic, health and lifestyle factors on the healthiness of the diets of Irish children.

Foods having a 'positive' profile were foods such as rice, pasta, flour and grains, low-fat spreads and fruit and vegetables, and in the list of foods with a 'negative' profile meat products, confectionery and carbonated beverages were present. In the list of foods classified as having 'no association' with a healthy diet, were foods such as biscuits, cream, cheese, puddings and chilled deserts and diet-carbonated beverages. In most cases the classification of foods was supported in later regression analysis, thus reinforcing the findings. An increasing number of eating occasions outside the home and desire-to-drink score, children that were not breast-fed and being of a skilled-manual social class were significantly associated with a decreased likelihood of a 'healthy diet' ($P \leq 0.05$) and having parents that disagree to the statement 'my child's weight is fine for their age' was significantly associated with an increased likelihood of a 'healthy diet' ($P \leq 0.05$).

The study explores consumption patterns and lifestyle factors in relation to the overall diet quality. The data from the study will provide the foundations for developing evidence-based public health nutrition policies for the reduction and prevention of diet-related chronic diseases in Ireland.

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