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Evaluating the impact of a healthy lifestyle programme on the diet and lifestyle factors of children and their families, in an area of higher deprivation

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In the UK, the prevalence of childhood obesity and lifestyle-related diseases is rising. Poverty perpetuates negative health outcomes in children, including obesity and poor mental health. Children from deprived regions have higher exposure to high fat, salt and sugar (HFSS) product advertising[(1)]. They consume more sugary beverages and fewer fruit and vegetables. This highlights the need for interventions in these areas. This study aims to assess the impact of an in-school initiative on healthy living in an area of higher deprivation.

The intervention was delivered at a primary school in Retford, Nottinghamshire, which on the Index of Multiple Deprivation was ranked 4,605 out of 32,844 in England (1 being most deprived). For education, Retford was ranked better than only 1% of areas in England, and better than only 13% for employment and health. Free school meal eligibility also exceeded the national average of 22.5%[(2)]at 29.2%.Sixty children were recruited from all 10–11-year-olds attending the school, independent of body mass index (BMI).

A multi-disciplinary team designed a 10-week programme, named Healthier Futures (HF). Content covered nutrition and physical education, with activities such as team sports and sorting snacks by sugar content. Behaviour change was supported through activities including exploring food triggers and habits.

Questionnaires to quantify diet and lifestyle changes were completed by the participants and their families. Children's BMI and waist circumference were also measured. Data was collected at the first and final sessions and was tested for statistical significance using a combination of t-tests for normally distributed anthropometric (paired) data and two-tailed Mann-Whitney testing for lifestyle (non-paired) data.

Average attendance was high at 92.2%. Fifty-three families completed the pre- and post-programme questionnaires.

Sedentary screen time fell by over 34% ($P = 0.005$). Fruit, vegetable and salad intake improved, families eating more than three salad foods weekly increased by 57% ($P = 0.013$). Four times as many children reduced their intake of HFSS foods to less than once weekly ($P = <0.001$), and 67% of children consumed less than one sugary drink per week ($P = 0.013$). Takeaway consumption fell, with 54% more families having less than one per week ($P = <0.001$).

These behavioural changes are associated with supporting a healthy weight. However, average BMI at both week 1 and 10 was 18.9kg/m2 ($P = 0.932$). Waist to height ratio for those exceeding a ratio of 0.5 showed a non-significant increase of 0.012 ($P = 0.437$). This is likely due to the programme's short duration and diversity in BMI at baseline.

Dietary habits in childhood track into adulthood and influence the development of chronic illness. The HF programme demonstrated statistically significant improvements in diet and lifestyle factors linked to obesity among families in an area of higher deprivation. Future studies are needed to explore the sustainability of these outcomes.

References

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