

Exploring change in the diet quality of 11–12y olds in 2010 and 2022: a repeat cross-sectional study

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The National Diet and Nutrition Survey (2021) indicates some improvement in children's diets, however, intakes of saturated fat and free sugars remain above recommendations⁽¹⁾. School food is an important contributor and has the potential to improve children's diets⁽²⁾. Diet quality assesses variation in diet and adherence to food based dietary guidelines, a higher diet quality score indicates better adherence⁽³⁾. Dietary data was collected in 11–12y olds in Northumberland schools to explore dietary intakes over time⁽⁴⁾.

To explore changes in the diet quality of schoolchildren aged 11–12 years in Northumberland in 2010 and 2022.

Ethics approval was obtained from Newcastle University Research Ethics Committee (reference 1861/695). Participants were recruited, using opt-out consent, and completed three-day diet diaries at two time points, including week and weekend days. A follow-up interview clarified information and dietary data was entered into Intake24 (intake24.co.uk), an online dietary assessment tool. Diet quality scores were calculated using the diet quality index for adolescents (DQI-A), this uses food group intakes and is composed of three components including diet quality, diet diversity and diet equilibrium⁽³⁾. Socioeconomic status was classified using pupil postcodes and the English Index of Multiple Deprivation 2019 (IMD) and separated into quintiles with quintile 1 being the least deprived (Q1) and quintile 5 the most deprived (Q5). Analyses explored mean change of DQI-A and IMD between 2010 and 2022, and mean DQI-A scores for packed and school lunch consumers in 2010 and 2022 using t-tests, analyses were conducted in Stata v17.

A total of 341 children participated (2010 n = 215; 2022 n = 126). Similar numbers of males and females participated: M = 108, F = 107 (2010); M = 60 F = 62 (2022). Mean DQI-A scores were: 16.4 (SD 12.5) (2010) and 19.6 (SD 15.0) (2022) p = 0.001. Mean IMD was 23.4 (SD 18.9) (2010) and 39.2 (SD 18.3) (2022), p = 0.001. DQI-A score between Q1 and Q5 was statistically significant for 2010 but not 2022. In 2010, Q1 = 17.8 (SD 10.5) and Q5 = 11.7 (SD 10.8), p = 0.003. In 2022, Q1 = 15.0 (SD 14.1) and Q5 = 20.7 (SD 14.3), p = 0.501. There was no evidence of a statistically significant difference between packed and school lunch DQI-A scores in 2010 and 2022. In 2010, mean DQI-A scores were 16.2 (SD 11.1) and 15.4 (SD 13.3) for packed (n = 137) and school lunch (n = 78) consumers respectively (p = 0.405); in 2022, mean DQI-A scores were 22.6 (SD 15.0) and 18.6 (SD 12.7) for packed (n = 25) and school lunch (n = 89) consumers respectively (p = 0.202).

Preliminary findings suggest that the pupils participating in 2022 were more deprived and that children's mean DQI-A has improved since 2010. However, there are several limitations with these findings for example, two schools did not participate in 2022. More robust analyses are required to explore the effects of year, lunch type, IMD, and any interactions.

References

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