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Collecting regional data for public health focusing on diet and sustainability measures using myfood24

J.E. Cade^{1,2}, C. Rycroft¹, S. Beer² and N Corrigan³

¹Nutritional Epidemiology Group, School of Food Science and Nutrition, University of Leeds, UK

²Dietary Assessment Ltd, Nexus Building, Leeds, UK

³Office for Health Improvement and Disparities, Department of Health and Social Care Blenheim House, Leeds, LS1 4PL

There is no regular, routine measurement of food and nutrient intake undertaken regionally in the UK. This makes evaluation of local public health interventions challenging. Consumers want to be more sustainable in what they are eating. Social media penetration in the UK is 90%⁽¹⁾, with ~47m people using Facebook, a potential route to study recruitment. Nutritional analysis software with accurate underpinning food composition and sustainability data could enable quick and easy large scale data collection. This study aimed to collect diet and sustainability measures using online tools and to test the feasibility of using social media to obtain a large, regionally focused sample in a short time.

We undertook a rapid, time limited, regional (Yorkshire and Humber) food and nutrient tracking survey ‘One day: Diet in Yorkshire and Humber’ for use with policy makers⁽²⁾. A Facebook (FB) boost approach was used to recruit a regional sample of adults. Participants completed a brief online demographic survey and used myfood24[®] to give a detailed measure of their food intake for the previous day. myfood24[®] generic and branded databases were used⁽³⁾ which include sustainability metrics.

The FB posts were boosted for 21 days and reached 76.9k individuals. Just under £1,000 was spent on 3 FB boosts and 1,428 participants completed the questionnaire. 673 participants also completed the one-day diet diary. Hull, Barnsley and Doncaster had the highest rates of overweight and obesity in the region. Overall nutrient values recorded were similar to national survey data for older women. Intakes of fibre (mean 18g, SD 11) and iron (mean 9.6mg, SD 5.0) were low. For the first time, measures of sustainability from the diet were calculated from myfood24[®].

The mean greenhouse gas emissions (GHGE) were 5.9(kg CO₂ eq/day) (95% CI 5.6, 6.1); land use 9.0 (m²/year/day) (95% CI 7.6, 10.3) and water use 582 (l/day) (95% CI 551, 611). Regression analysis showed that for each additional 100kcal consumed there was a significant increase in GHGE of 0.9 (kg CO₂ eq/day) (95% CI 0.8, 1.1). Land and water use were also significantly increased with increasing energy intake. Adjusting for total energy, protein intake was positively associated with all 3 metrics. Carbohydrate was inversely associated with GHGE and land use. However, fat intake was not associated with any of the sustainability measures. Portions of fruit and vegetables consumed were positively associated with water use only.

Diet is clearly linked to sustainability. The mean GHGE from diet is equivalent to driving an average car ~22km/day. We successfully recruited a large sample in a short timeframe using FB. Participants were able to use online tools to report food intakes. This data is relevant to local and national policy makers to monitor and evaluate public health programmes.

References

1. Ofcom. Adults’ media use and attitudes 2023 [Available at: https://www.ofcom.org.uk/_data/assets/pdf_file/0028/255844/adults-media-use-andattitudes-report-2023.pdf].
2. Rycroft C, Beer S, Corrigan N *et al.* (2022) *Nutrients* 14(24) doi: 10.3390/nu14245322 [published Online First: 2022/12/24].
3. Carter MC, Hancock N, Albar SA *et al.* (2016) *Nutrients* 8(8) doi: 10.3390/nu8080480 [published Online First: 2016/08/17].