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USING LATENT CLASS ANALYSIS TO EXPLORE DIETARY PATTERNS AND THEIR ASSOCIATIONS BETWEEN SOCIODEMOGRAPHIC CHARACTERISTICS, FOOD SOURCES, DIETARY DIVERSITY, AND FOOD INSECURITY IN SMALL ISLAND DEVELOPING STATES

¹Eden Augustus*, ²Divya Bhagtani, ³Emily Haynes, ⁴Arlette St Ville, ⁵Viliamu Iese, ⁶Jioje Fesaitu, ⁶Florian Kroll, ¹Ian Hambleton, ⁷Sara Benjamin-Neelon, ^{2,3}Nigel Unwin. ¹The George Alleyne Chronic Disease Research Centre, The University of the West Indies, Bridgetown, Barbados; ²MRC Epidemiology Unit, University of Cambridge, Cambridge, UK; ³European Centre for Environment and Human Health, University of Exeter, Turo, UK; ⁴Faculty of Food and Agriculture, The University of the West Indies, St. Augustine, Trinidad and Tobago; ⁵Pacific Centre for Environment and Sustainable Development (PaCE-SD), The University of the South Pacific, Suva, Fiji; ⁶Institute for Poverty, Land and Agrarian Studies (PLAAS), University of the Western Cape and DSI-NRF Centre of Excellence in Food Security, Cape Town 7535, South Africa; ⁷Department of Health, Behaviour and Society, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland, USA

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Background The high burden of disease related to malnutrition in Small Island Developing States (SIDS) has been exacerbated by increasing levels of food insecurity (FI) and loss of food sovereignty. Internationally, household, or individual level FI is associated with poorer diets and nutritional status. Our study aimed to investigate whether there are distinct dietary patterns, and if so whether they are associated with socio-demographic characteristics (SDC), dietary diversity scores (DDS), food sources and experience of food insecurity in adults in two SIDS: Fiji and St. Vincent and the Grenadines (SVG).

Methods A cross-sectional household survey was conducted, recruiting adults and adolescents (> 15 years) from 95 and 86 households in rural and urban Fiji (n=186) and SVG (n=147), respectively. Data were collected by trained interviewers using standard tools with a 24-hour recall component, adapted to the local food environments. Latent class analysis (LCA) was conducted using 13 food groups, and moderate to severe FI categories derived from the Food Insecurity Experience Scale (FIES). LCA was undertaken in R, and best fit solutions were based on the AIC results. Differences between the LCA derived classes were examined using one-way ANOVA and Pearson Chi-Squared tests.

Results In both Fiji and SVG the best fit LCA derived 3 distinct dietary patterns, across which were differences in DDS (p<0.001). In Fiji dietary patterns were associated with age (p=0.042), sex (p=0.047), and rural residence (p=0.005). In SVG there were no associations with SDCs. In both Fiji and SVG dietary patterns were associated with >weekly sourcing of food by borrowing/exchanging (p<0.001), and in both settings sourcing food in this way was most frequent in the dietary pattern with the highest DDS. In SVG >weekly sourcing food from a small shop varied by dietary pattern (p=0.002), being highest in that with the lowest DDS. In Fiji FI was associated with dietary patterns (p=0.011), ranging from 6.7% (95%CI 3.0, 14.1) to 26.5% (95%CI 14.3, 43.7). In SVG there was no apparent association between FI and dietary pattern (p=0.507), and FI in the whole sample was 35.4% (95% CI 27.6, 43.1).

Conclusion Food environment and culture likely accounts for differences across settings. However, associations were found among dietary patterns and SDC, FI and food sources in at least one setting, with sourcing food through borrowing/bartering prominent among groups in both settings, with the highest DDS. This highlights the need for further research to inform policies.

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PENETRATION AND PRESENTATION OF FRONT-OF-PACK NUTRITION LABELLING IN UK SUPERMARKET WEBSITES: PRELIMINARY SURVEY RESULTS

Sally Moore*, Aimee Hall. School of Food Science and Nutrition, University of Leeds, Leeds, West Yorkshire, UK

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Background The availability and format of Front-of-Pack nutrition labels (i.e. Traffic Lights) on product packaging supports consumers' use of this information when making food choices.¹ For products sold online, research around 2015 has indicated inconsistencies in the presentation of nutrition information across supermarket websites² and a lack of use of product information by online shoppers.³ However, online grocery shopping is currently growing in popularity in the UK and has the potential to support the selection and purchase of healthier foods via the provision of appropriate product nutrition information/signposting.⁴ This study aims to assess the penetration of FOP nutrition label information on products sold in UK online supermarkets. Variations in the availability and presentation of this information by online retailer, brand, product category and nutritional composition are also to be explored.

Methods Conducted during 2020–2021, products sold within the entire (chilled) beef burger, Greek yoghurt and muesli categories of five UK online supermarkets were surveyed. Data was collected on presence, type and format components of FOP labelling together with information on product attributes, including brand and nutritional composition. The latter was used to calculate FOP traffic light colour coding according to UK criteria.⁵ Preliminary analysis performed included descriptive statistics presented by retailer, product brand and overall nutritional composition

Results Findings show that 59% of the total of 244 surveyed products displayed FOP labelling, with variations in penetration across retailers. Where FOP labelling was declared, 62% of products displayed this in formats compliant with one or more elements of 'best practice' guidance on the presentation of this information on-pack.⁶ Overall, greater penetration of FOP traffic light labels was found on products of supermarkets' own brand (64%), or those with ≤ 1 red traffic lights (96%), compared to branded products (19%) or those with ≥2 red traffic lights (1%).

Conclusion Initial findings suggest the penetration of FOP nutrition labelling on products sold in UK online supermarkets is variable within and between retailers. Further research is warranted. To ensure the consistent availability and presentation of FOP nutrition label information across all product types sold in UK supermarket websites, there is a need for presentational guidance.

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