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Dietary patterns in ethnic minority groups: data analysis of vegetable intake from 'Understanding Society' (the UK Household Longitudinal Study)

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The UK population is ageing and becoming more ethnically diverse(1). Nutrition is a key modifiable determinant of healthy ageing but there is little published data of dietary patterns in ethnic minority groups. The reasons for poor dietary habits of older adults from ethnic minority groups could be attributed to cost of living, language barriers, age, availability of traditional foods(2). As part of a larger research study to improve nutritional health in older adults (TANGERINE: nuTritional heAlth aNd aGeing in oldER ethnIc miNoritiEs), the aim of this study was to investigate vegetable intake in different older ethnic groups compared with a white (British) reference population.

We used food frequency questionnaire (FFQ) data drawn from Wave 2 (2010-2012) and Wave 13 (2021-2022) of Understanding Society, a UK household panel survey(3). We calculated the proportions of vegetable intake by ethnic group for each wave, weighted for population representativeness, and used (weighted) logistic regression for intake (everyday vs less than every day) to adjust for potential confounders. Data from the WHO food insecurity questionnaire in wave 13 was used to evaluate the ethnic group differences in food insecurity.

The percentage vegetable intake at least every day was reduced between Waves 2 and 13 in all ethnic groups. At both Waves all ethnic groups, except Indian ethnicity have lower vegetable intakes than white (British) reference group. The age and sex adjusted odds ratios (OR) (95% confidence intervals) at Wave 2 were 0.60 (0.51, 0.71) for Caribbean, 0.67 (0.56, 0.79) for African, 0.36 (0.28, 0.44) for Pakistani, 0.78 (0.62, 0.98) for Bangladeshi and 1.10 (0.94, 1.28) for Indian. The differences could be largely explained by lower income and greater area deprivation for Bangladeshi, less so for Caribbean, African and Pakistani groups. Results were similar for Wave 13. All ethnic groups, except Indian had higher odds of greater food insecurity than the white (British) reference group, largely attributed to income and area deprivation, for example, the OR for Pakistani group compared with white (British) reference group decreased from 1.74 (1.18, 2.56) to 1.05 (0.70, 1.58). However, for the African group, the OR remained greater than white reference population at 2.55 (1.73, 3.76) even after accounting for socioeconomic position.

The findings suggest differences in vegetable intake between different ethnic groups which have been maintained between 2010-2012 and 2021-2022 and may be explained to some extent by socioeconomic disadvantage. Whilst we used cross-sectional analyses of self-reported data, there remains a need for further large-scale studies using longitudinal and experimental designs in older ethnic groups considering socioeconomic position, recognising the importance of heterogeneity and the need to analyse ethnic groups individually, rather than as a group for measurements of dietary intake.

Acknowledgments

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