

Food behaviours in the UK student population: background and methodology

Background

The Food Standards Agency (FSA) works to protect public health and consumers' wider interests in relation to food in England, Wales and Northern Ireland. The FSA's goal and vision is to ensure that 'food is safe', 'food is what it says it is', and 'food is healthier and more sustainable'. Food Standards Scotland (FSS) has similar responsibility in Scotland, and aims to ensure that 'food is safe and authentic' and 'consumers have healthier diets'. Since consumers are responsible for the safe preparation and storage of food in their home, the FSA and FSS gives practical guidance and recommendations to consumers on food safety and hygiene.

FSA research shows that younger adults are less worried about food safety and hygiene compared to older consumers ([Generation Z \(Opens in a new window\)](#)), and are less likely to follow recommended food practices ([COVID-19 Consumer Tracker](#)). Our flagship survey, Food and You 2 (a source of official statistics on household food security) has for example, shown that students are less likely to cook food until it is steaming hot and cooked all the way through, less likely to store raw meat/poultry away from cooked foods, or to always wash their hands immediately after handling raw meat, poultry or fish compared to some occupational groups ([Food and You 2: Wave 4](#)). Whilst FSA surveys include university students, the sample size is limited, meaning we are not able to explore differences in sub-groups or generalise to the wider student population. Additionally, the sample we do reach will not be representative of the student population because communal establishments, including halls of residence, are not included in sampling frames for our surveys (e.g., Food and You 2, Consumer Insights Tracker).

The move to university is a significant life change for many, providing autonomy of food choice and behaviours, as such, this transition has been identified as a key moment of change: a disruption to established behavioural routines and habits which can influence long lasting changes in relation to a range of food behaviours (['Moments of Change' and Food-Related Behaviours](#)). Research suggests that this 'moment' can lead to the consumption of poor quality, high cost and low nutrient diets which can impact body weight, long-term eating habits and health (Racette et al., 2005) ([footnote 1](#)). The UK 2021 Census reports the 15-24 population as 6.9m ([Population and household estimates, England and Wales: Census 2021, Table P01 \(Opens in a new window\)](#)), with 2.7m higher education enrolments in the 2020/21 academic year (HESA 20/21 ([footnote 2](#))) students make up a significant proportion of this age group, suggesting that many young adults may be in this 'moment' ([footnote 3](#)).

Recent data shows that 18% of adults across England, Wales and Northern Ireland are food insecure. Whilst this data suggested that full-time students were more likely to be food insecure than those in many occupational groups ([Food and You 2: Wave 4](#)), given the limited sample of this group the prevalence of food insecurity in the wider university student population is unknown.

The National Student Money Survey (Brown, 2022 ([footnote 4](#))) note a rise in UK students living costs by 14% since the 2021 survey, compared to a 2.3% and 4.5% increase in the maximum Maintenance loan for students in England and Scotland respectively. The average student's Maintenance loan therefore falls short of covering living costs by £439 each month. In line with this, the survey found that 1 in 10 (10%) of students had used a food bank in the last year and 82% are worried about making ends meet. Almost half (47%) of the students surveyed reported

that their diet has suffered due to financial worries.

There is little academic research exploring food safety behaviours amongst UK students. However, a small-scale study demonstrated that students lack food safety knowledge and frequently self-report food safety malpractice when preparing food (Evans, 2016). International research has evidenced poor food safety practices in non-UK student populations. For example, in the UAE, sponges in halls of residence kitchens were shown to contain high levels of potentially pathogenic bacteria (for example, mesophilic aerobic bacteria, yeasts and moulds), and these were often used to clean multiple surfaces, including the kitchen sink, fridge, and in some cases, the kitchen floor, in addition to cleaning dishes. Sponges were typically kept for one (58%) or two months (32%), and never sterilised (70%) (Osaili et al., 2020) [\(footnote 5\)](#).

Due to the paucity of information on the student population, we are unable to identify the challenges to food safety that students may experience, such as sharing a kitchen and fridge with multiple people. Consequently, there is a lack of insight into the food safety behaviours of students, who are potentially a high-risk group. The current research was designed to explore the knowledge, attitudes, and behaviours of university students, as well as the experiences and challenges, relating to food safety and food insecurity, and how these vary between different groups of students. Knowing more about this group will enable us to identify risky food behaviours, develop effective communications to address these, and potentially foster long-term good food safety behaviours in a key cohort of consumers.

Methodology

Sixteen university students took part in online co-creation sessions which were held between July and December 2021. Participants were recruited through the Food and You 2 re-contact list and an advert in a university hall of residence newsletter. Each co-creation session lasted up to two hours and participants received a £20 voucher as remuneration.

The main aims of the sessions were to identify the experiences and challenges regarding food safety, food security, diet and other food-related topics which university students may experience; to review the draft survey which was adapted from the Food and You 2 survey [\(footnote 6\)](#); and to inform the development of survey questions which capture the experiences and challenges identified.

The first three co-creation sessions focused on the identification of experiences and challenges relating to food safety, food security and diet. The sessions consisted of a brief introduction to the topics; a group discussion about key experiences and challenges; visualisation activity of kitchen food safety 'hotspots'; development and feedback on the draft survey. The final co-creation session focused on finalising the survey. Feedback was provided on the survey to ensure the new questions or response options which had been developed in previous sessions were clear and comprehensive (see Appendix A for the co-creation session discussion guide summary).

Content analysis was used to analyse the data from the co-creation sessions. An initial coding framework, based on the topics in the discussion guide, was updated throughout the analysis process to ensure that any new or emerging themes (for example, bin diving / freeganism [\(footnote 7\)](#) and cleanliness of kitchen sink). Time stamps and quotes were recorded to facilitate reporting of the analysis. A second researcher coded the data to establish a percentage agreement of 85% for sub-themes.

Findings from the co-creation sessions went on to inform the development of an online survey, conducted between 2nd and 28th February 2022. A representative sample of 2,921 undergraduate university students were recruited across England, Wales, Northern Ireland, and Scotland. The sample in Scotland had a target sample of N=500 to allow sub-group analysis. To ensure the sample was representative, quotas were set based on Higher Education Statistics Agency data, by gender, ethnicity, region and parental SEG.

Participants were recruited from the YouthSight panel and received an incentive for completing the survey ([footnote 8](#)). Participants had the option of submitting photos of the sink and fridge at their term-time accommodation for which they could receive an additional incentive. The survey took approximately 20 minutes to complete.

The survey included a range of topics including demographic information, knowledge, attitudes, behaviour relating to food safety, food security, diet and other food-related topics which university students living in halls of residence and shared houses experience (see Appendix A for the survey).

The data were collected during a period of political and economic change and uncertainty following the UK's exit from the EU and the COVID-19 pandemic. This context is likely to have had an impact on the level of food-related behaviours and food security reported. Image coding using citizen science is expected to be launched Winter 2022 (expect to complete 2023), where photos of sinks and fridges which were submitted as part of the online survey will be uploaded to the citizen science platform [Zooniverse \(Opens in a new window\)](#). Citizen scientists will analyse the photos to identify if the sinks and fridges adhere to good hygiene practice.

Limitations

Co-creation session participants were recruited via the Food & You 2 recontact list (which included contacts in England, Wales, and Northern Ireland) and a university halls of residence (based in the North of England) newsletter. However most participants who took part in the sessions were based at universities in the north of England, which may introduce bias toward the experiences of those in certain geographical areas. Future research could address this issue by recruiting participants from a wider range of regions.

The kitchen image (Figure 1) used in the co-creation sessions did not include a kitchen bin. However, as kitchen bins were a notable discussion point in the co-creation sessions which led to the development of a survey question (see Annex A), it is expected that the impact of the omission on the data will be minimal.

The online survey recruited respondents using a panel (Savanta, formally Youthsight). The use of different recruitment tools can result in differences in the demographic characteristics and observed perceptions of respondents ([Armstrong et al., 2021 \(Opens in a new window\)](#)). However, as the panel used is the largest of young adults in the UK and enabled a range of measures (e.g., quota sampling strategy based on HESA data, a nationally representative sample, weighting applied to the data) to minimise any impact on the data, it is expected that any impact on the data will be minimised.

Interpreting the findings

To highlight the key differences between socio-demographic and other sub-groups, variations in responses are typically reported only where the absolute difference is 10 percentage points or larger and is statistically significant at the 5% level ($p < 0.05$). However, some differences between socio-demographic and other sub-groups are included where the difference is less than 10 percentage points, when the finding is notable or judged to be of interest. These differences are indicated with a double asterisk (**).

In some cases, it was not possible to include the data of all sub-groups, however such analyses are available in the full data set and tables. Key information is provided for each reported question in the footnotes, including:

- question wording (question) and response options (response)

- number of respondents presented with each question and description of the respondents who answered the question (Base= N)
 - 'Please note:' indicates important points to consider when interpreting the results
1. [Racette, S. B., Deusinger, S. S., Strube, M. J., Highstein, G. R. & Deusinger, R. H. \(2005\) Weight changes, exercise, and dietary patterns during freshman and sophomore years of college. Journal of American College Health, 53\(6\), 245-251, doi.org/10.3200/JACH.53.6.245-251.](#)
 2. [HE student enrolments 2020/21, HESA.](#)
 3. Data from the Scotland 2022 census were not available at the time of publication.
 4. Brown, L (2022) [Student Money Survey 2022 – Results - Save the Student.](#)
 5. [Osaili, T.M., Obaid, R.S., Alowais, K. et al. Microbiological quality of kitchens sponges used in university student dormitories. BMC Public Health 20, 1322 \(2020\). https://doi.org/10.1186/s12889-020-09452-4.](#)
 6. The draft survey was developed from the FSAs flagship consumer survey, Food and You 2. Existing questions were taken from a range of modules including 'Eating at home', 'Food security', 'Food shopping' and 'Eating out and takeaway'.
 7. [For information about freeganism see: The Freegan phenomenon: anti?consumption or consumer resistance?; Food Waste in Australia: The Freegan Response.](#)
 8. Participants received points which could be converted into shopping vouchers.