Food and You Survey Wave 4 (2016)

User Guide

NatCen Social Research

A survey carried out for Food Standards Agency

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NatCen Social Research
35 Northampton Square
London EC1V 0AX
T 020 7250 1866
www.natcen.ac.uk

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1 Overview of the survey

1.1 Background

Since its inception in 2000, the Food Standards Agency (FSA) has commissioned surveys to collect quantitative data on the public's reported behaviour, attitudes and knowledge relating to food and food safety. Between 2000 and 2007 the FSA ran the Consumer Attitudes Survey (CAS).[1] In 2008 FSA's Social Science Research Committee (SSRC) recommended that a new survey – Food and You – be developed.[2]

Food and You was set up as a biennial, cross-sectional survey of adults aged 16 years and over living in private households in England, Wales and Northern Ireland. Random probability sampling ensures that everyone in the included countries had an equal chance of being selected to take part, so the results are representative of the population. The first three waves of the survey were carried out by TNS BMRB (in 2010, 2012 and 2014 respectively). NatCen Social Research (NatCen), in collaboration with the Northern Ireland Statistics and Research Agency (NISRA), have been contracted to carry out Waves 4, 5 and 6 of the survey.

Topics have reflected the priorities and interests of the FSA and the survey has been an important means of measuring progress against the FSA's Strategic Plan 2010-2015[3], providing evidence to assess delivery across the FSA's strategic objectives.[4] The first wave of Food and You (2010) assessed consumer attitudes and behaviour to food-related issues falling under the FSA's remit. Following Wave 1, the questionnaire was reviewed extensively in light of responsibility for nutrition in England and Wales being transferred from FSA in 2010.[4]

Wave 2 (2012) focussed on food safety and hygiene issues and Wave 3 (2014) was designed to monitor changes since the previous two waves in attitudes and reported behaviour about food issues, to identify at-risk groups for food safety issues, and to explore public understanding of issues regarding the FSA's targets. For the first time at Wave 3, results from Food and You were published

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[1] Further information about the CAS can be found at: http://tna.europarchive.org/20111116080332/http://www.food.gov.uk/science/socsci/surveys/foodsafety-nutrition-diet/.

[2] See SSRC 2008 report, Monitoring Public Attitudes and Behaviour – A Review of the Agency's Consumer Attitudes Surveys http://ssrc.food.gov.uk/sites/default/files/mnt/drupal_data/sources/files/multimedia/pdfs/ssrc0822v1.pdf

[3] https://www.food.gov.uk/sites/default/files/FSA%20strategy%20document%202015-2020_April%202015_interactive%20%282%29.pdf

[4] See the FSA Strategy to 2015 http://webarchive.nationalarchives.gov.uk/20120206100416/http://food.gov.uk/multimedia/pdfs/strategy20102015.pdf

as an official statistic, reflecting the robust methodology of the survey and the development of a regular time series of data. Wave 4 of Food and You included new questions to cover affordability of food, choice, security and sustainability.

New questions and modifications to the Wave 4 questionnaire were tested using cognitive testing techniques. The questionnaire was piloted prior to the start of mainstage fieldwork. Full details are given in the Development report.

Aims

Food and You provides data about the prevalence of different attitudes, reported behaviour and knowledge about ways in which food is purchased, stored, prepared and eaten. The aims of Wave 4 were to provide the FSA with data on food hygiene and food safety and other food-related issues in order to:

- explore public understanding and engagement with food safety
- assess knowledge of messages and interventions aimed at raising awareness and changing behaviour
- describe public attitudes to food production and the food system
- monitor trends in reported behaviour, attitudes and knowledge (compared with data from the previous three waves or from other sources)
- identify target groups for future interventions (e.g. those most at risk or those among whom FSA policies and initiatives are likely to have the greatest impact)
- provide indicators and evidence for tracking the FSA's strategic plans[3]

1.2 Sample Design

1.2.1 Sampling frame and stratification

The sample was drawn from the Postcode Address File (PAF)[5], a list of all the addresses in the UK. In order to improve cost effectiveness, the addresses were clustered into Primary Sampling Units (PSUs), small geographical areas, based on postcode sectors, randomly selected from across England, Wales and Northern Ireland. A list of addresses was randomly selected from each PSU.

The primary sampling units (PSUs) were postcode sectors. Sectors with fewer than 500 addresses were grouped with a neighbouring sector and treated as a single PSU.

[5] The sample was drawn from the 'small users' sub-file of the Postcode Address File (PAF), a computer list, prepared by the Post Office, of all the addresses (delivery points) which receive fewer than 25 articles of mail a day.

A multi-stage, random probability cross-sectional design incorporating the following stages was used:

- Stratification[6]
- Selection of:
    - primary sampling units (PSUs)
    - addresses
    - dwelling unit[7], where necessary
    - households[8], where necessary
    - participants

Probability methods were applied at each stage, so that each adult had an equal probability of selection.

Prior to selection of PSUs, the sampling frame[9] was sorted by region (Government Office Region, with Wales and Northern Ireland both treated as separate regions). Within each region the PSUs were sorted by the percentage of heads of households in a non-manual occupation (NS-SEC groups 1-3), the percentage of households with no car, and population density (persons per hectare). This was to ensure correct socio-economic representation when the PSUs were selected.

1.2.2 Selecting addresses and participants

A total of 6,550 addresses were selected from 262 PSUs: 183 PSUs in England, 39 in Wales and 40 in Northern Ireland.

At each address, the interviewer established the number of dwelling units and, in cases where there were two or more (e.g. different flats or bedsits), selected one unit at random using a Kish grid.[10]

Within each selected dwelling unit the interviewer enumerated the number of households and, in cases where there were two or more (e.g. house shares), selected one household at random, again using a Kish grid.[11]

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[6] Prior to selection the PSU sampling frame was sorted by Government Office Region (GOR) with Wales and Northern Ireland both treated as separate regions. Within each GOR the PSUs were sorted by percentage of Household Reference Persons in a non-manual occupation (NS-SEC groups 1-3), the percentage of households with no car, and population density (persons per hectare). This ensured correct socio-economic representation when the PSUs were selected.

[7] Dwelling units were defined as addresses or parts of addresses that have a lockable front door, and to which only the inhabitants have access. Most addresses selected from the PAF contain a single dwelling unit. However, a small number of addresses contain multiple dwelling units (such as flats or bedsits).

[8] Households were defined as groups of people who share cooking facilities and a living room, sitting room or dining room.

[9] The most up-to-date (August 2014) Postcode sector file was used; this included a list of postcode sectors and the number of addresses registered within them.

[10] Using a Kish grid ensures that the unit (dwelling unit, household or household members) is selected without interviewer bias. The number of units is listed across the top of the grid, with a random number below to indicate which unit should be selected.

Within the selected household, one adult aged 16 years and over was selected to take part in the Food and You survey. In instances where there was more than one eligible adult within the household, the interviewer listed all members in alphabetical order of their first name and made a random selection using a Kish grid.[11]

1.3 Data Collection

Fieldwork for Food and You Wave 4 was carried out between 27 May and 30 September 2016. NatCen carried out fieldwork in England and Wales; NISRA conducted fieldwork in Northern Ireland.

Fieldwork (both for NatCen and NISRA) was issued in three batches as follows:

Batch	Start date	End date
1	27th May 2016	7th July 2016
2	22nd June 2016	2nd August 2016
3	22nd July 2016	30th September 2016

An advance letter and leaflet describing the purpose of the survey and inviting households to participate was sent to all sampled addresses before the fieldwork start date. A few days later, interviewers visited the addresses to determine whether the address was private, residential and occupied. They then carried out the selection process.

Interviewers were required to make up to four attempts to contact each sampled address. These calls were made on different days of the week, and at different times of day. At least three calls were made on a weekday evening (after 6pm) or at a weekend to maximise the probability of contact with the household members.

Data was collected via face-to-face interviews using a Computer Assisted Personal Interview (CAPI) method. CAPI interviewing involves the interviewer reading questions from a laptop screen and entering the participants' responses into designated fields. This automated procedure allows quick and accurate interviewing and data transmission.

The final Wave 4 questionnaire comprised nine distinct modules, relating to a range of different behaviours, attitudes and knowledge pertaining to the FSA's policy interests:

- Information about household members
- Eating habits
- Shopping habits
- Food insecurity

- Food safety
- Food issues
- Healthy eating (Northern Ireland only)
- Health
- Demographics

The interview also identified the Household Reference Person (HRP)[11] in each household and asked questions about housing tenure, as well as his or her employment, to determine the socio-economic classification of the household.[12]

1.4 Response rates

The table below shows response rates achieved overall and in the individual countries. For Wave 4 overall, the response rate was 52.6% in England, 58.4% in Wales, 57.8% in Northern Ireland.

	Country			
	England	Wales	Northern Ireland	Overall
Issued Addresses (n)	4575	975	1000	6550
Ineligible (n)	390	131	93	614
Eligible	4185	844	907	5936
Unproductive (n)	2077	351	383	2811
Fully productive Interview (n)	2105	492	521	3118
Partially productive interview (n)[a]	3	1	3	7
Response rate (%)	**50.4**	**58.4**	**57.8**	**52.6**

[a] The seven partially productive individuals started but did not complete the interview. These cases did not count towards the response rate and were not included in the analysis dataset.

1.5 Reports and publications

Main findings from across England, Wales and Northern Ireland were published in the combined report. In addition, individual reports have been produced for Wales and Northern Ireland. The Northern Ireland report also includes a section on healthy eating. Users might also be interested in the Technical and Development report. All reports can be found here:

https://www.food.gov.uk/science/research-reports/ssresearch/foodandyou

[11] The 'Household Reference Person' (HRP) was defined as the householder (a person in whose name the property is owned or rented) with the highest income. If there was more than one householder and they had equal income, then the eldest was selected as the HRP.

[12] Questions were asked to ascertain whether the HRP was in paid work at the time of the interview and, if not, whether they had ever had a paid job. If the HRP had ever worked, there were further questions about their current or most recent job in order to classify HRPs into the National Statistics Socio-economic Classification (NS-SEC) groupings.

2 Using the data

2.1 Documentation

The data file contains data from Wave 4 of the FSA Food and You Survey. The documentation has been organised into the following sections:

- Interview: the CAPI questionnaire and interviewer instructions
- Data: contains a list of all variables as well as a list of derived variables including their SPSS syntax specification
- Other instructions: contains interviewer and coding and editing instructions

Please note that in some instances, variables have a different name in the CAPI programme (as shown in the Food and You Survey Wave 4_Questionnaire file) and in the data file. In such instances, please use the variable labels provided in the data file as guidance.

2.2 Variables on the data file

The data file contains questionnaire variables (excluding personal/identifying and administrative data) and derived variables. The variables included in the file are detailed in the 'Variable List' document. As far as possible they are grouped in the order they were asked in the interview. As such, following the questionnaire design, they are grouped according to topic. This 'Variable List' document is the best place to look/search for variables when planning your analysis.

Once you have decided which variables to include in your analysis, you should look up details of the question wording using the questionnaire documentation, or use the data documentation to find the syntax which produced the derived variables. You cannot rely on the individual variable and value labels to always capture the detail of the question asked, or the answer categories used, so reading the interview documentation is essential.

For variables with answers following a scale, such as 'Strongly agree' to 'Strongly disagree' it must be noted that the order of the answer categories may not systematically follow an ascending or descending scale throughout the list of variables. Also the answers may equally refer to positive or negative statements. The phrasing of the question and the list of answers provided on the show cards – if any – shape the variables. The user must therefore take these variations into account when creating derived variables.

2.3 Multi-coded questions

Some questions in the survey enabled participants to give more than one answer. In the final dataset each of the answer options has been converted into a binary variable with the people who selected that option coded 1 and the rest coded 0.

As an example, question Q2_7 is a 'CODE ALL THAT APPLY' question which asks 'Which, if any, of the following applies to you?'. The code frame consists of 5 values:

1. Completely vegetarian
2. Partly vegetarian
3. Vegan
4. Avoid certain foods for religious or cultural reasons
5. None

The five answer options have been converted into five separate binary variables as follows:

Q2_71 – code 1: those who are completely vegetarian; code 0: those who are not completely vegetarian.

Q2_72 – code 1: those who are partly vegetarian; code 0: those who are not partly vegetarian.

Q2_73 – code 1: those who are vegan; code 0: those who are not vegan.

Q2_74 – code 1: those who avoid certain foods for religious or cultural reasons; code 0: those who do not avoid certain foods for religious or cultural reasons.

Q2_75 – code 1: those of whom none of the answer options applied to; code 0: everyone else.

Because a respondent could have replied with more than one answer, that respondent could have a value 1 for a number of these variables (however, the nature of the question dictates that having a code 1 at Q2_75 precludes having a code 1 at any of the variables Q2_71 – Q2_74). The missing values are same across all five variables.

2.4 Missing value conventions

These missing value conventions have also been applied to most of the derived variables as well as the original questionnaire variables. The derived variable specifications should be consulted for details.

-1 Item not applicable: used to signify that a particular variable did not apply to a given respondent usually because of internal routing. For example,

participants who said they were vegetarian or vegan would not be routed into the question 'How often do you eat cuts or portions of beef, lamb or pork (e.g. joints steak, chops)?

-8 Don't know/Can't say.

-9 No answer/Refused.

2.5 Notes about particular variables

2.5.1 Food Security

This section explains how the variable Food Security was scored. Household food security status is measured by the responses to a series of questions about behaviours and experiences associated with difficulty in meeting food needs. The ten questions used in Food and You are those used by the United States Department of Agriculture Economic Research Service.[13] Responses are allocated a score and households are categorised as follows:

1. *High food security* (score = 0): households had no problems, or anxiety about, consistently accessing adequate food.

2. *Marginal food security* (score = 1 – 2): households had problems at times, or anxiety about, accessing adequate food, but the quality, variety and quantity of their food intake were not substantially reduced.

3. *Low food security* (score = 3 – 5): households reduced the quality, variety, and desirability of their diets, but the quantity of food intake and normal eating patterns were not substantially disrupted.

4. *Very low food security* (score 6 – 10): at times during the year, eating patterns of one or more household members were disrupted and food intake reduced because the household lacked money and other resources for food.

Examples of the questions asked are:

> Was this statement often, sometimes, or never true for you in the last 12 months? "We worried whether our food would run out before we got money to buy more."
>
> *Or*

[13] See www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/measurement/ for further details. The United States Department of Agriculture (USDA) monitors the extent and severity of food insecurity in U.S. households through an annual, nationally representative survey sponsored and analysed by USDA's Economic Research Service.

In the last 12 months, did you ever not eat for a whole day because there wasn't enough money for food?

Responses of 'yes', 'often', sometimes', 'almost every month' and 'some months but not every month' are coded as affirmative. The sum of affirmative responses to the 10 questions in the Adult Food Security Scale is the household's raw score on the scale.

2.5.2 Index of Recommended Practice

Food and You asks respondents a series of questions about whether they follow recommended practices in relation to five important elements or 'domains' of food safety: cleanliness, cooking, chilling, avoiding cross-contamination and use by dates. To get an overall picture of people's food safety behaviour, however, it is useful to look across all five domains. The Index of Recommended Practice (IRP) is a composite measure of food hygiene knowledge and behaviours within the home, which includes 17 questions from each of the five domains.[14]

Questions were selected for the IRP because they mapped onto practices that, if not followed, were more likely to increase the risk of foodborne disease. Each item scores 1 for response in line with recommended practice (RP) or 0 for responses not in line with recommended practice (NRP). For example, within the chilling domain, respondents were asked:

'Do you ever check your fridge temperature?'

Respondents who answered 'yes', 'someone else in the household does' or 'I don't need to as it has an alarm' were coded as 1 (RP). Respondents who answered 'no' or 'don't know' were coded as 0 (NRP). See the Research Report for the response coding of all 17 questions.[14]

The overall score of the 17 questions is then converted to a score out of 100. A higher score indicates more reported behaviours that are in line with recommended food safety practices. It is important to note that IRP gives an overall indication of whether recommended practices are being followed and is useful for comparing across subgroups but it does not inform about individual behaviours.

[14] https://www.food.gov.uk/science/research-reports/ssresearch/foodandyou/fs409012-2

3 Weighting

The weighting procedure for Wave 4 followed the same procedure applied in the first three waves of the study, and included:

Calculation of selection (design) weights. These were applied to correct for the lower selection probabilities of adults aged 16+ in multi-adult households/dwellings, as well as for the selection of one dwelling unit/household if two or more were found at the selected address. The design weight also corrected for the over representation of Wales and Northern Ireland relative to England (as a result of the boosted samples in those countries).

In order to ensure the results from each country were representative of that country's population, the achieved interviews were calibrated separately for each country to known population distributions of:

- In England: working status by gender, age by gender, and region
- In Wales/Northern Ireland: working status by gender, and age group

This accounted for differential non-response on these variables. The calibration results within each country were combined to create *cweight* – to be used for the analysis within country.

The Wave 4 population totals for age, gender and region were obtained from the ONS 2016 Mid-Year Population Estimates. The employment status data was gathered from the latest available Labour Force Survey (LFS) data released in November 2016.[15] Employment data for individuals aged 16+ was split into four categories as follows:

- Female in employment
- Female not in employment
- Make in employment
- Male not in employment[16]

Finally, the countries were scaled to their correct proportion and combined to calculate a weight for analysis of the whole dataset (*ukweight*).

[15] In the first three waves of Food&You the Annual Population Survey (APS) was used as the source of population totals of working status. As the Labour Force Survey (LFS) data was considered to be a more reliable source of population estimates, this was adopted for Wave 4. The 2016 working status numbers from LFS and APS are comparable, hence no bias is expected to be introduced as a result of this change.

[16] In the first three waves Food&You, the following categories of employment status by gender were used: male full time, male not full time, women working, and women not working. For Wave 4, mean and women are treated similarly and are split into two groups: in employment and not in employment.

Design effect. The design effect[17] caused by weighting of the sample was also calculated. In conducting significance tests it is assumed that the achieved sample is a simple random sample from the survey population. The overall design effect for the whole dataset is 1.81. The actual sample size divided by the design effect equals the effective sample size: 1,719 cases.

The table below shows the profile of the unweighted and weighted Wave 4 sample for a range of variables used in weighting. These are compared to the populations totals.

	Population Totals		Food and You unweighted sample		Food and You weighted sample	
	n	%	n	%	n	%
Employment status by gender						
Men in employment	15,676,464	32.4	672	21.6	1007	32.3
Men not in employment	7,976,513	16.5	561	18.0	515	16.5
Women in employment	13,703,319	28.3	906	29.1	884	28.4
Women not in employment	11,035,135	22.8	979	31.4	712	22.8
Age (years)						
16-24	6,776,417	14.0	223	7.2	434	13.9
25-34	8,110,971	16.8	421	13.5	522	16.7
35-49	11,943,267	24.7	745	23.9	771	24.7
50-64	10,932,607	22.6	788	25.3	706	22.6
65+	10,628,169	22.0	941	30.2	686	22.0
Government Office Region						
North East	2,159,604	4.5	117	3.8	139	4.5
North West	5,820,624	12.0	302	9.7	376	12.0
Yorkshire and Humber	4,371,577	9.0	190	6.1	280	9.0
East Midlands	3,815,349	7.9	205	6.6	246	7.9
West Midlands	4,628,624	9.6	231	7.4	299	9.6
South West	4,513,700	9.3	242	7.8	291	9.3
East of England	4,919,174	10.2	252	8.1	317	10.2
London	6,909,128	14.3	231	7.4	444	14.2

[17] The design effect takes into account the actual complexity of the sample design. This is the ratio of the actual variance, under the sampling method used, to the variance computed under the assumption of simple random sampling.

South East	7,243,433	15.0	335	10.7	467	15.0
Wales	2,543,797	5.3	492	15.8	164	5.3
Northern Ireland	1,466,421	3.0	521	16.7	94	3.0