Food and You 2: Wave 4 Key Findings

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Executive Summary

Overview of Food and You 2

Food and You 2 is a biannual 'Official Statistic' survey commissioned by the Food Standards Agency (FSA). The survey measures self-reported consumers' knowledge, attitudes and behaviours related to food safety and other food issues amongst adults in England, Wales, and Northern Ireland.

Fieldwork for Food and You 2: Wave 4 was conducted between 18th October 2021 and 10th January 2022. A total of 5,796 adults from 4,026 households across England, Wales, and Northern Ireland completed the 'push-to-web' survey (see Annex A for more information about the methodology).

The modules presented in this report include 'Food you can trust', 'Concerns about food', 'Food security', 'Eating out and takeaways', 'Food allergies, intolerances and other hypersensitivities', 'Eating at home', 'Food shopping: sustainability and environmental impact' and 'Sustainable diets, meat alternatives and genetic technologies'.

Summary of key findings

Food you can trust

Confidence in food safety and authenticity

- Most respondents (92%) reported that they were confident that the food they buy is safe to eat.
- More than 8 in 10 (86%) respondents were confident that the information on food labels is accurate.

Confidence in the food supply chain

- Around three quarters of respondents (76%) reported that they had confidence in the food supply chain.
- Respondents were more likely to report confidence in farmers (88%) and shops and supermarkets (85%) than in takeaways (61%), and food delivery services (45%).

Awareness, trust and confidence in the FSA

- Most respondents (92%) had heard of the FSA.
- Around three quarters (77%) of respondents who had at least some knowledge of the FSA reported that they trusted the FSA to make sure ‘food is safe and what it says it is’.
- Over 8 in 10 (85%) respondents reported that they were confident that the FSA (or the government agency responsible for food safety) can be relied upon to protect the public from food-related risks (such as food poisoning or allergic reactions from food), 80% were confident that the FSA is committed to communicating openly with the public about food-related risks, and 83% were confident that the FSA takes appropriate action if a food-related risk is identified.

Concerns about food

- Most respondents (86%) had no concerns about the food they eat, and only 14% of respondents reported that they had a concern.
- Respondents with a concern were asked to briefly explain what their concerns were about the food they eat. The most common concerns related to food production methods (31%) and to environmental and ethical concerns (23%).
- Respondents were asked to indicate if they had concerns about a number of food-related issues, from a list of options. The most common concerns related to food waste (63%), the amount of sugar in food (59%) and animal welfare (56%).

Food security

- Across England, Wales, and Northern Ireland, 82% of respondents were classified as food secure (70% high, 12% marginal) and 18% of respondents were classified as food insecure (10% low, 7% very low).
- Food security levels were comparable across England, Wales, and Northern Ireland.

Eating out and takeaways

- Around half of respondents had eaten food in a restaurant (53%), from a café, coffee shop or sandwich shop (either to eat in or to take out) (52%) or ordered a takeaway directly from a takeaway shop or restaurant (50%) in the previous 4 weeks.
- Over a third of respondents had eaten food from a fast-food outlet (either to eat in or take out) (38%) or ordered a takeaway from an online food delivery company (for example, Just Eat, Deliveroo, Uber Eats) (35%). Around 1 in 10 (9%) respondents had not eaten food from any of the listed food businesses in the previous 4 weeks.

- Most respondents (89%) reported that they had heard of the FHRS. Over half (59%) of respondents reported that they had heard of the FHRS and had at least a bit of knowledge about it.

Food allergies, intolerances and other hypersensitivities

- Most respondents (76%) reported that they did not have a food hypersensitivity. Just over 1 in 10 (12%) respondents reported that they had a food intolerance, 4% reported having a food allergy, and 1% reported having coeliac disease.
- Of the respondents who reported having a food allergy, the most common foods reported as causing a reaction were peanuts (26%) and fruit (24%).
- Of the respondents who reported having a food intolerance, the most common foods reported as causing a reaction were cow's milk and products made with cow's milk (41%) and cereals containing gluten (19%).

Eating at home

Use-by dates

- Over two thirds (69%) of respondents identified the use-by date as the information which shows that food is no longer safe to eat.
- Around two-thirds (67%) of respondents reported that they always check use-by dates before they cook or prepare food.
- Most respondents reported that they had not eaten shellfish (90%), other fish (82%), smoked fish (76%) or raw meat (71%) past the use-by date in the previous month.

Avoiding cross-contamination

- Over half of respondents (56%) reported that they never wash raw chicken, whilst 40% of respondents wash raw chicken at least occasionally.

Food shopping: sustainability and environmental impact

- Almost a third (30%) of respondents reported buying food which has a low environmental impact always or most of the time. Half of respondents thought that eating less processed food (50%) and 47% thought that minimising food waste contributed most to someone having a sustainable diet.
- Most (59%) respondents thought that buying locally produced food or food that is in season contributed most to someone making sustainable food shopping choices. However, almost 1 in 10 (9%) respondents reported that they did not know what contributed most to sustainable food shopping choices.

Sustainable diets, meat alternatives and genetic technologies

- The most common changes respondents reported making in the previous 12 months were eating less processed food (40%) and starting to minimise food waste (40%).
- Around a third (32%) of respondents reported that they currently eat meat alternatives, 21% of respondents reported that they used to eat meat alternatives but no longer do and 39% of respondents reported that they had never eaten meat alternatives.
- Respondents reported greater awareness and knowledge of genetically modified (GM) food (9% had never heard of GM food) than gene-edited or genome-edited food (GE) (42% had never heard of GE food).

Acknowledgements

First and foremost, our thanks go to all the respondents who gave up their time to take part in the survey.

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Introduction

The Food Standards Agency: role, remit, and responsibilities

The Food Standards Agency (FSA) is a non-ministerial government department working to protect public health and consumers' wider interests in relation to food in England, Wales, and Northern Ireland[1]. The FSA's overarching mission is 'food you can trust'. The FSA's vision as set out in the 2022-2027 strategy is a food system in which:

- Food is safe
- Food is what it says it is
- Food is healthier and more sustainable

Food and You 2 is designed to monitor the FSA's progress against this vision and inform policy decisions by measuring self-reported consumers' knowledge, attitudes and behaviours related to food safety and other food issues in England, Wales, and Northern Ireland on a regular basis.

[1] In Scotland, the non-ministerial office Food Standards Scotland, is responsible for ensuring food is safe to eat, consumers know what they are eating and improving nutrition.

Food and You 2

In 2019 Ipsos was commissioned by the FSA to develop and run a biannual survey, 'Food and You 2', carried out primarily online.

Food and You 2 replaced the FSA's face-to-face Food and You survey (2010-2018)[2], Public Attitudes Tracker (2010-2019) and Food Hygiene Rating Scheme (FHRS) - Consumer Attitudes Tracker (2014-2019). Due to differences in the question content, presentation and mode of response, direct comparisons should not be made between these earlier surveys and Food and You 2. More information about the history and methodology can be found in Annex A.

Food and You 2: Wave 4

Food and You 2: Wave 4 data were collected between 18th October 2021 and 10th January 2022. A total of 5,796 adults from 4,026 households across England, Wales, and Northern Ireland completed the survey (an overall response rate of 28.5%).

Food and You 2: Wave 4 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 security, concerns and food-related behaviours reported in Food and You 2[3].

Food and You 2 is a modular survey, with 'core' modules included every wave, 'rotated' modules repeated annually or biennially, and 'exclusive' modules asked on a one-off

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[2] The Food and You survey has been an Official Statistic since 2014.

[3] Consumer insights tracker report: key findings from December 2021 to March 2022 (2022), FSA. The UK Public's Interests, Needs and Concerns Around Food (2022), Bright Harbour. Food in a pandemic (2021). FSA. UK Household Food Waste tracking survey Winter 2021: Behaviours, attitudes, and awareness (2022), WRAP The true cost of living- The action needed to stem the rising tide of destitution: March 2022, Trussell Trust. Family Resources Survey (FRS): financial year 2020 to 2021 (2021). DWP. The FRS asks respondents to report experiences of food insecurity in the last 30 days so responses cannot be compared with Food and You 2.

basis. The modules presented in this report include: ‘Food you can trust’ (core); ‘Concerns about food’ (core); ’Food security’ (core); ‘Eating out and takeaways’ (rotated); ‘Food allergies, intolerances and other hypersensitivities’ (rotated); ‘Eating at home’ (rotated); ‘Food shopping: sustainability and environmental impact’ (rotated); and, ‘Sustainable diets, meat alternatives and genetic technologies’ (rotated).

This report presents key findings from the Food and You 2: Wave 4 survey. Not all questions asked in the Wave 4 survey are included in the report. The full results are available in the accompanying full data set and tables.

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.

Future publication plans

Modules expected to be reported in the Food and You 2: Wave 5 Key Findings report include, ‘Food you can trust’ (core), ‘Concerns about food’ (core), ‘Food security’ (core), ‘Food shopping’, (rotated) and ‘Eating at home’ (rotated). However, findings included in the Food and You 2: Key Findings reports will be responsive to new and emerging issues

and observations which are novel or of interest. A series of secondary reports will explore key modules in more detail.

Chapter 1: Food you can trust

Introduction

The FSA's overarching mission is 'food you can trust'. The FSA's vision is a food system in which:

- Food is safe
- Food is what it says it is
- Food is healthier and more sustainable

This chapter provides an overview of respondents' awareness of and trust in the FSA, as well as their confidence in food safety and the accuracy of information provided on food labels[4].

Confidence in food safety and authenticity

Most respondents reported confidence (for example, were very confident or fairly confident) in food safety and authenticity; 92% of respondents reported that they were confident that the food they buy is safe to eat, and 86% of respondents were confident that the information on food labels is accurate[5].

Confidence in food safety varied between different categories of people in the following ways:

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[4] In line with the FSA's 2022-2027 Strategy, future reports will also consider food being healthier and more sustainable within this chapter.

[5] Question: How confident are you that… A) the food you buy is safe to eat. B) the information on food labels is accurate (for example, ingredients, nutritional information, country of origin). Responses: Very confident, Fairly confident, Not very confident, Not at all confident, It varies, Don't know. Base= 4786, all online respondents and all those who completed the 'Eating at Home' paper questionnaire.

- NS-SEC[6]: respondents in some occupational groups (for example, 94% of those in intermediate occupations) were more likely to be confident that the food they buy is safe to eat than respondents who were long term unemployed and/or had never worked (77%).

Confidence in the accuracy of information on food labels varied between different categories of people in the following ways:

- Annual household income: respondents with an income over £96,000 (96%) were more likely to report confidence in the accuracy of food labels compared to those with an income of less than £95,999 (for example, 84% of those with an income of £19,000-£31,999).

- NS-SEC: respondents in occupational groups (for example, 88% of those in managerial, administrative and professional occupations) were more likely to report being confident that the information on food labels is accurate, compared to respondents who were long term unemployed and/or had never worked (74%).

Confidence in the food supply chain

Around three quarters of respondents (76%) reported that they had confidence (i.e., very confident or fairly confident) in the food supply chain[7].

Confidence in the food supply chain varied between different categories of people in the following ways:

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[6] The National Statistics Socio-economic classification (NS-SEC) is a classification system which provides an indication of socio-economic position based on occupation and employment status.

[7] Question: How confident are you in the food supply chain? That is all the processes involved in bringing food to your table. Responses: Very confident, Fairly confident, Not very confident, Not at all confident, It varies, Don't know. Base= 4786, all online respondents and all those who completed the 'Eating at Home' paper questionnaire.

- Age group: respondents aged 65-74 years (83%) were more likely to report confidence in the food supply chain compared to younger adults (for example, 70% of those aged 35-44 years).

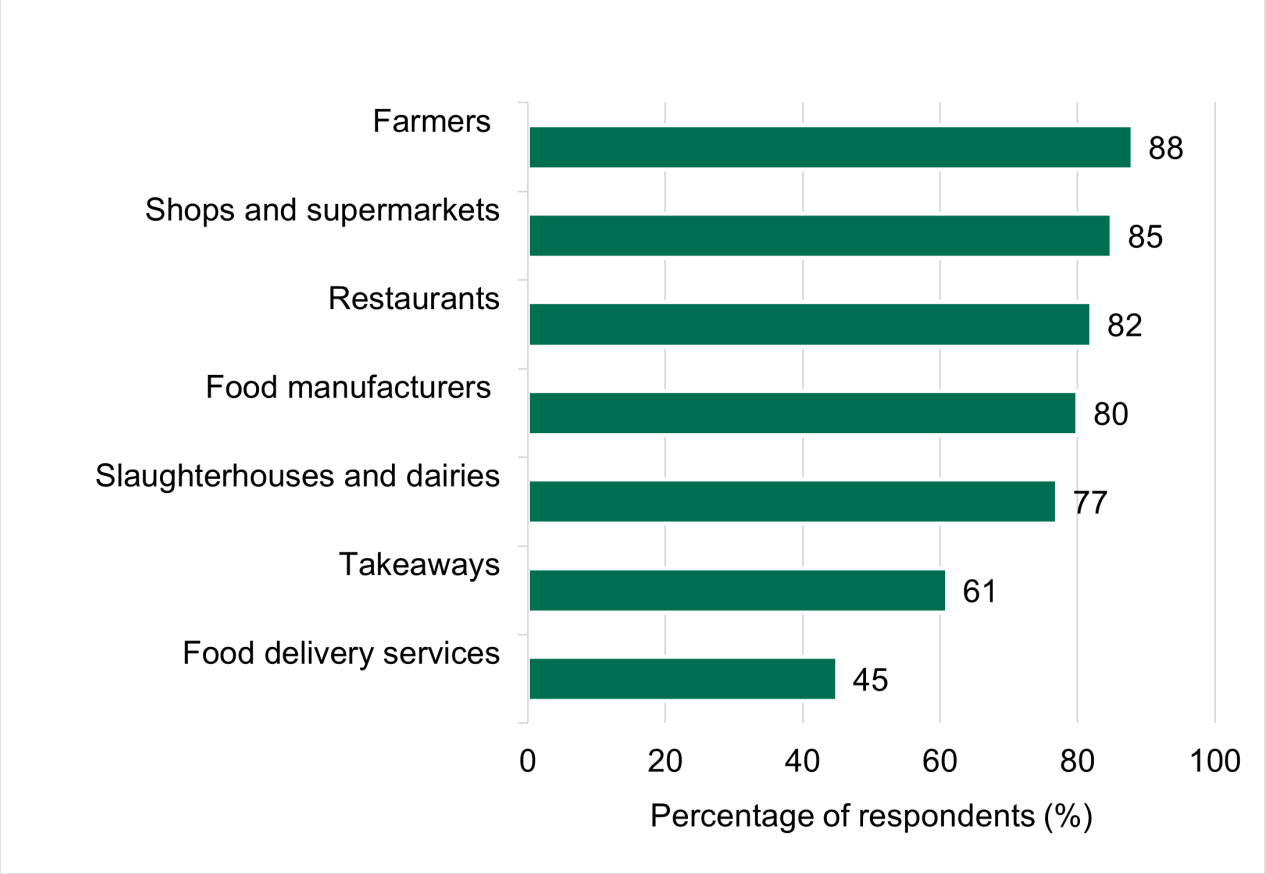
- NS-SEC: respondents in occupational groups (for example, 78% of those in intermediate occupations) were more likely to report confidence in the food supply chain than those who were long term unemployed and/or had never worked (64%).

- Food security: respondents with a high (78%) level of food security were more likely to report confidence in the food supply chain than respondents with very low (68%) food security.

- Ethnic group: white respondents (77%) were more likely to report confidence in the food supply chain than Asian or British Asian (68%) respondents**.

- Food hypersensitivity: respondents who did not have a food hypersensitivity (77%) were more likely to report confidence in the food supply chain compared to respondents with a food intolerance (69%).

Figure 1: Confidence that food supply chain actors ensure food is safe to eat.



Source: Food and You 2: Wave 4

Respondents were asked to indicate how confident they were that key actors involved in the food supply chain ensure that the food they buy is safe to eat. Respondents were more likely to report confidence (i.e. very confident or fairly confident) in farmers (88%), and shops and supermarkets (85%) than in takeaways (61%), and food delivery services for example, Just Eat, Deliveroo, Uber Eats (45%) (Figure 1)[8].

[8] Question: How confident are you that... A) Farmers, B) Slaughterhouses and dairies, C) Food manufacturers for example, factories, D) Shops and supermarkets, E) Restaurants, F) Takeaways, G) Food delivery services for example, Just Eat, Deliveroo, Uber Eats…in the UK (and Ireland) ensure the food you buy is safe to eat. Responses: Very confident, Fairly confident, Not very confident, Not at all confident, It varies, Don't know. Base= 4755, all online respondents and all those who completed the 'Eating Out' paper questionnaire.

Awareness, trust and confidence in the FSA

Most respondents (92%) had heard of the FSA[9].

Awareness of the FSA varied between different categories of people in the following ways:

- Age group: older respondents were more likely to have heard of the FSA than younger respondents. For example, 96% of those aged 65-74 years had heard of the FSA, compared to 81% of those aged 16-24 years.
- NS-SEC: respondents in some occupational groups (for example, 96% of those in intermediate occupations) were more likely to have heard of the FSA compared to those who were long term unemployed and/or had never worked (70%) and full-time students (80%).
- Food security: respondents with a high (95%) level of food security were more likely to have heard of the FSA than respondents with low (85%) food security.
- Ethnic group: white respondents (94%) were more likely to have heard of the FSA compared to Asian or British Asian (82%) respondents.

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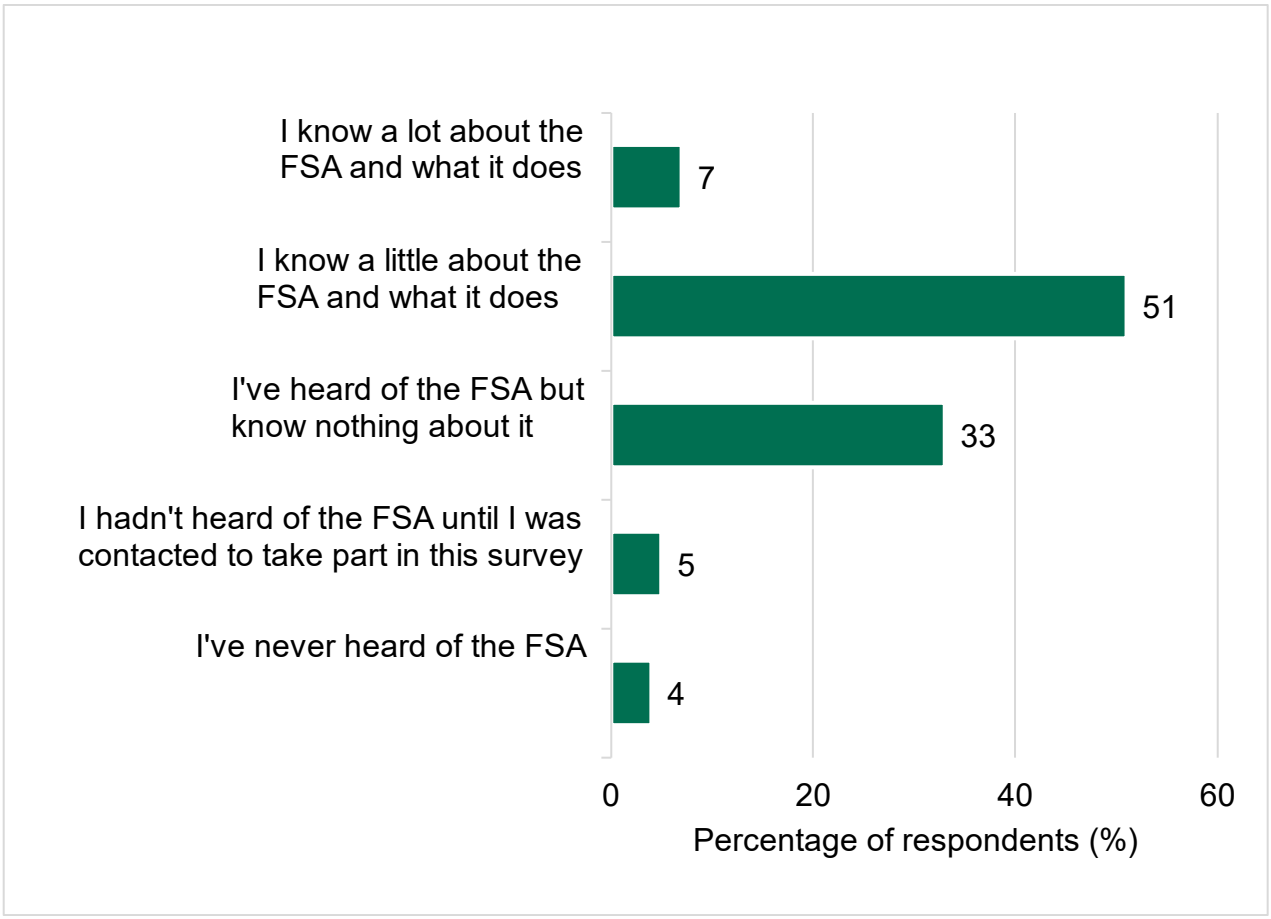
[9] Question: Which of the following, if any, have you heard of? Please select all that apply. Response: Food Standards Agency (FSA), (England) Public Health England (PHE), (England) Department for Environment, Food and Rural Affairs (DEFRA), (England) Environment Agency, (England and Wales) Health and Safety Executive (HSE), (Wales) Public Health Wales (PHW), (Wales) Natural Resources Wales, (NI) Public Health Agency (PHA), (NI) Department of Agriculture, Environment and Rural Affairs (DAERA), (NI) Health and Safety Executive Northern Ireland (HSENI), (NI) Safefood. Base= 3745, all online respondents. Please note: All consumers taking part in the survey had received an invitation to take part in the survey from Ipsos which mentioned the FSA. An absence of response indicates the organisation had not been heard of by the respondent or a non-response.

- Responsibility for cooking: respondents who were responsible for cooking (93%) were more likely to have heard of the FSA than those who do not cook (77%).
- Responsibility for food shopping: respondents who were responsible for food shopping (94%) were more likely to have heard of the FSA than those who never shop for food (74%).

Figure 2. Knowledge about the Food Standards Agency.



Source: Food and You 2: Wave 4

A majority of respondents reported at least some knowledge of the FSA; 7% reported that they knew a lot about the FSA and what it does, and 51% reported that they knew a little about the FSA and what it does. Around 4 in 10 (42%) respondents reported that they had no knowledge of the FSA; 33% had heard of the FSA but knew nothing about it,

5% had not heard of the FSA before being contacted to take part in Food and You 2, and 4% had not heard of the FSA (Figure 2)[10].

Knowledge of the FSA varied between different categories of people in the following ways:

- Age group: respondents aged between 45 and 64 years (for example, 69% of those aged 45-54 years) were more likely to report knowledge of the FSA compared to younger respondents (50% of those aged 16-24 years; 54% of those aged 25-34) or the oldest respondents (41% of those aged 75 years and over).

- NS-SEC: respondents in managerial, administrative, and professional occupations (63%) were more likely to report knowledge of the FSA than those who were in lower supervisory and technical occupations (53%), long term unemployed and/or never worked (45%) or full-time students (46%).

- Country: respondents in Wales (68%) were more likely to report knowledge of the FSA than those in England (57%). Six in ten (60%) respondents in Northern Ireland reported knowledge of the FSA.

- Food hypersensitivity: respondents with an allergy (70%) were more likely to report knowledge of the FSA compared to respondents with a food intolerance (56%) or those who did not have a food hypersensitivity (58%).

- Responsibility for cooking: respondents who were responsible for cooking (60%) were more likely to report knowledge of the FSA compared to respondents who do not cook (34%).

[10] Question: How much, if anything, do you know about the Food Standards Agency, also known as the FSA? Response: I know a lot about the FSA and what it does, I know a little about the FSA and what it does, I've heard of the FSA but know nothing about it, I hadn't heard of the FSA until I was contacted to take part in this survey, I've never heard of the FSA. Base= 5796, all respondents. Please note: All consumers taking part in the survey had received an invitation to take part in the survey which mentioned the FSA.

- Responsibility for shopping: respondents who were responsible for shopping (60%) were more likely to report knowledge of the FSA compared to respondents who never shop (35%).

Respondents who had at least some knowledge of the FSA were asked how much they trusted the FSA to do its job, that is to make sure food is safe and what it says it is; 77% of these respondents reported that they trusted the FSA to do this[11].

Over 8 in 10 (85%) respondents reported that they were confident that the FSA (or the government agency responsible for food safety) can be relied upon to protect the public from food-related risks (such as food poisoning or allergic reactions from food), 80% were confident that the FSA is committed to communicating openly with the public about food-related risks, and 83% were confident that the FSA takes appropriate action if a food-related risk is identified[12].

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[11] Question: How much do you trust or distrust the Food Standards Agency to do its job? That is to make sure that food is safe and what it says it is. Responses: I trust it a lot, I trust it, I neither trust nor distrust it, I distrust it, I distrust it a lot, Don't know. Base= 3543, all respondents who know a lot or a little about the FSA and what it does. Please note: 'I trust it a lot' and 'I trust it' referred to as trust.

[12] Question: How confident are you that the Food Standards Agency / the government agency responsible for food safety in England, Wales and Northern Ireland...A) Can be relied upon to protect the public from food-related risks (such as food poisoning or allergic reactions from food). B) Is committed to communicating openly with the public about food-related risks. C) Takes appropriate action if a food related risk is identified? Responses: Very confident, Fairly confident, Not very confident, Not at all confident, Don't know. Base= 5796, all respondents. Please note: 'Very confident' and 'Fairly confident' referred to as confident. Respondents with little or no knowledge of the FSA were asked about 'the government agency responsible for food safety', those with at least some knowledge of the FSA were asked about the FSA.

Chapter 2: Concerns about food

Introduction

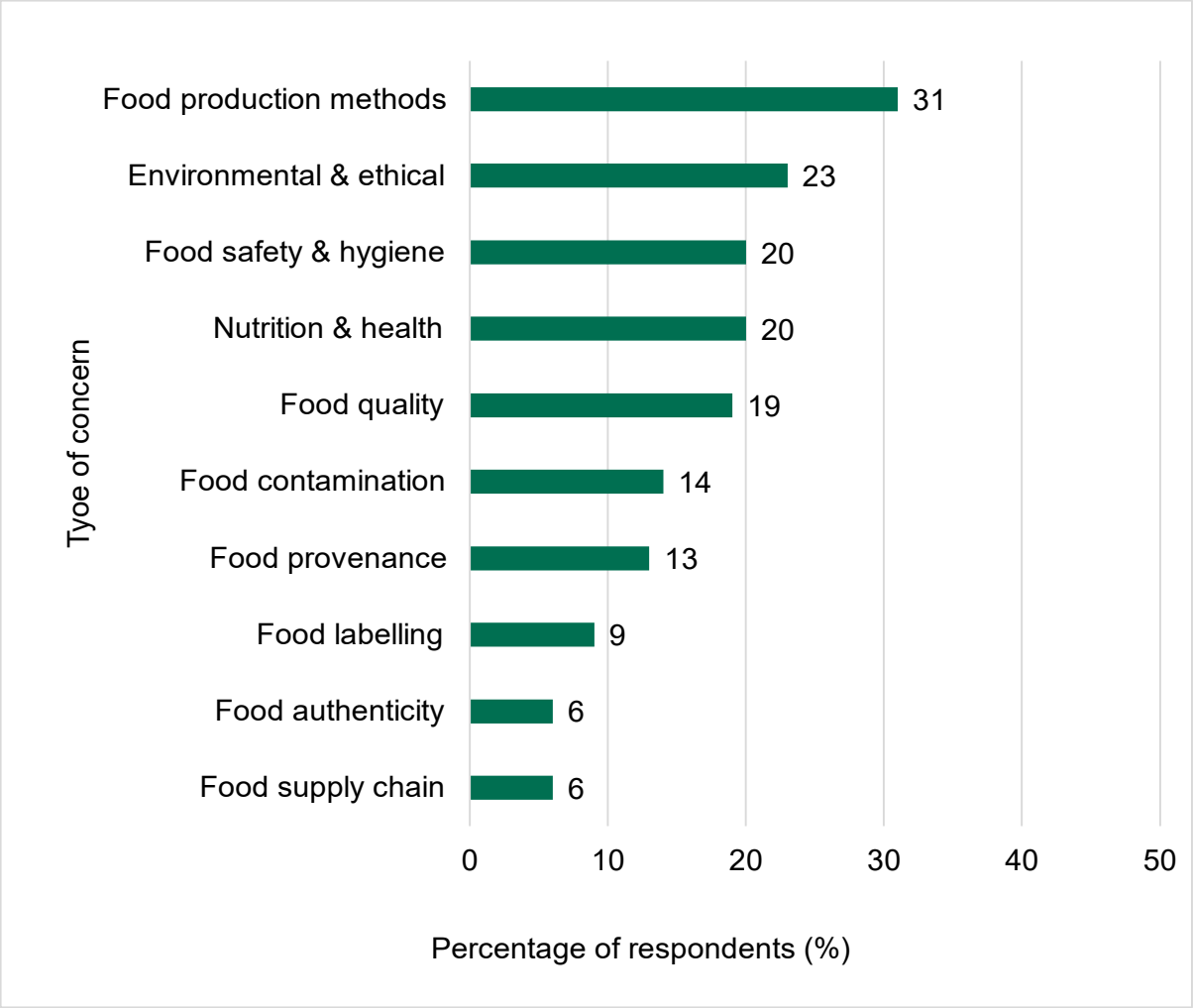
The FSA's role, set out in law, is to safeguard public health and protect the interests of consumers in relation to food. The FSA uses the Food and You 2 survey to monitor consumer concerns about food issues, such as food safety, nutrition, and environmental issues. This chapter provides an overview of respondents' concerns about food.

Common concerns

Respondents were asked to report whether they had any concerns about the food they eat. Most respondents (86%) had no concerns about the food they eat, and 14% of respondents reported that they had a concern[13].

[13] Question: Do you have any concerns about the food you eat? Responses: Yes, No. Base= 4786, all online respondents and all those who completed the 'Eating at Home' paper questionnaire.

Figure 3. Ten most common spontaneously expressed food-related concerns.



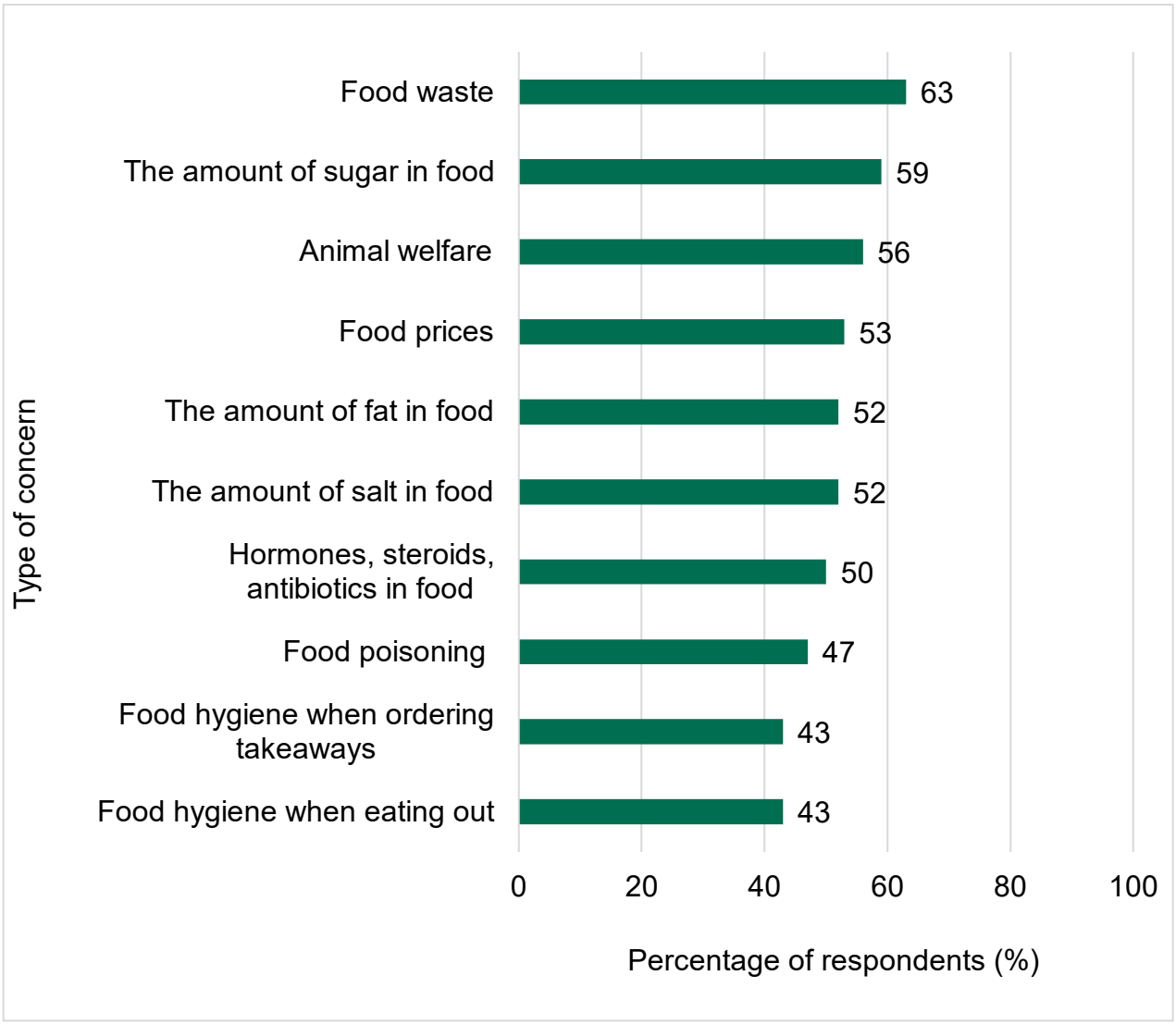
Source: Food and You 2: Wave 4

Respondents who reported having a concern were asked to briefly explain what their concerns were about the food they eat. The most common area of concern related to food production methods (31%), which included the use of additives (such as preservatives and colouring) in food products (14%), the use of pesticides / fertiliser to grow food (12%) and how food has been produced / processed (6%) (Figure 3).

The second most common concern related to environmental and ethical concerns (23%), which included animal welfare / treatment of animals (including transportation) (12%),

food miles (i.e. the distance that food travels) (5%) and the impact of producing / eating meat on the environment (5%) (Figure 3)[14].

Figure 4. Ten most common prompted food-related concerns.



Source: Food and You 2: Wave 4

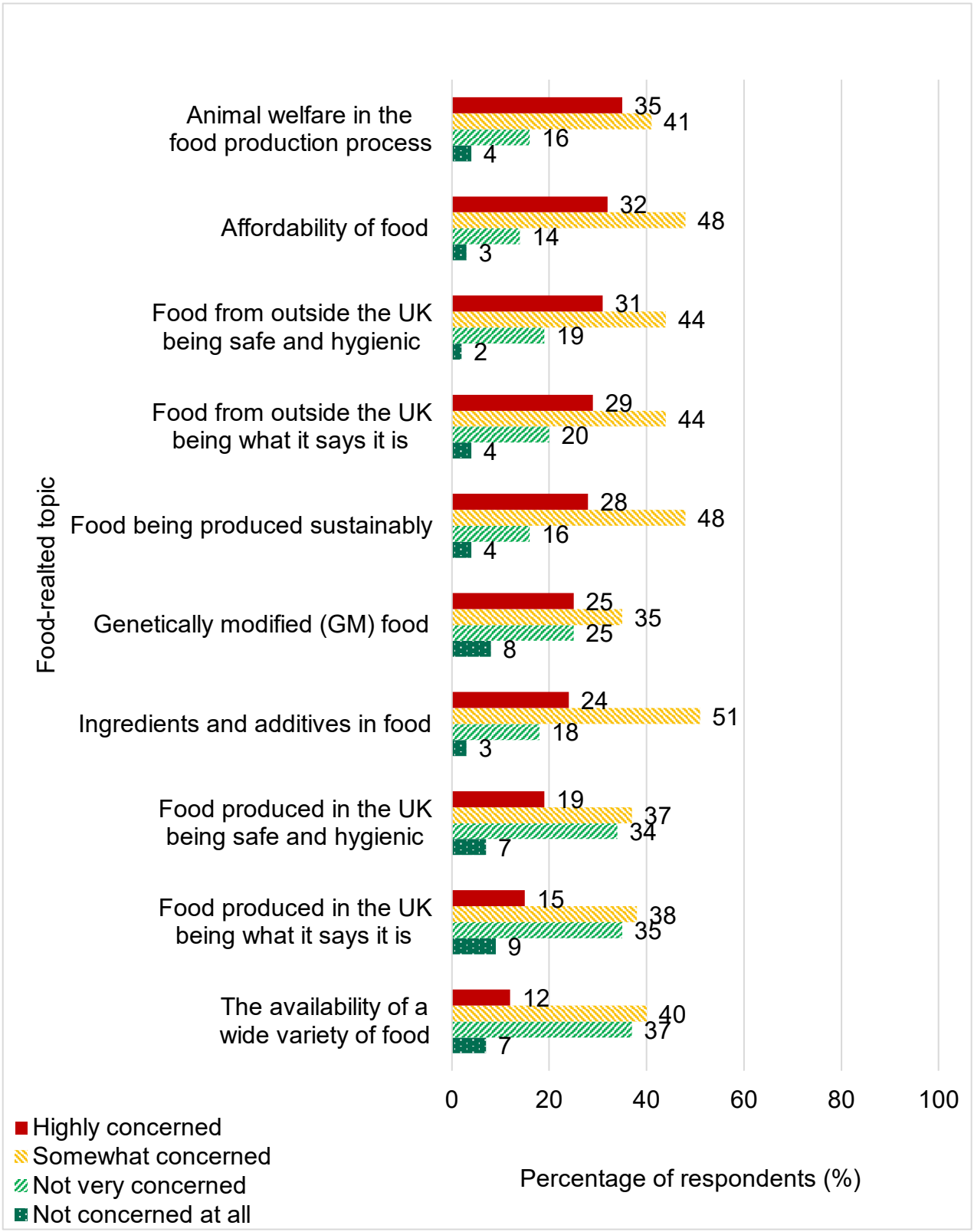
Respondents were asked to indicate if they had concerns about a number of food-related issues, from a list of options. The most common concerns related to food waste (63%), the amount of sugar in food (59%) and animal welfare (56%). Around half of respondents

[14] Question: What are your concerns about the food you eat? Responses: [Open text]. Base= 666, all respondents with concerns about the food they eat. Please note: additional responses are available in the full data set and tables, responses were coded by Ipsos, see Technical Report for further details.

were concerned about food prices (53%), the amount of fat in food (52%), the amount of salt in food (52%) and hormones, steroids and/or antibiotics in food (50%) (Figure 4)[15].

[15] Question: Do you have concerns about any of the following? Responses: The amount of sugar in food, Food waste, Animal welfare, Hormones, steroids or antibiotics in food, The amount of salt in food, The amount of fat in food, Food poisoning, Food hygiene when eating out, Food hygiene when ordering takeaways, The use of pesticides, Food fraud or crime, The use of additives (for example, preservatives and colouring), Food prices, Genetically modified (GM) foods, Chemical contamination from the environment, Food miles, The number of calories in food, Food allergen information, Cooking safely at home, None of these, Don't know. Base= 3745, all online respondents.

Figure 5. Level of concern about food-related topics.



Source: Food and You 2: Wave 4

Respondents were asked to indicate the extent to which they were concerned about a number of specific food-related issues. Respondents were most likely to report a high level of concern about animal welfare in the food production process (35%). Around 3 in

10 respondents reported a high level of concern about the affordability of food (32%) and food from outside the UK being safe and hygienic (31%) (Figure 5)[16].

Chapter 3: Food security

Introduction

This chapter reports the level of food security in England, Wales, and Northern Ireland, and how food security varied between different categories of people.

“Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.” World Food Summit, 1996.

Food and You 2 uses the U.S. Adult Food Security Survey Module developed by the United States Department of Agriculture (USDA) to measure consumers’ food security.

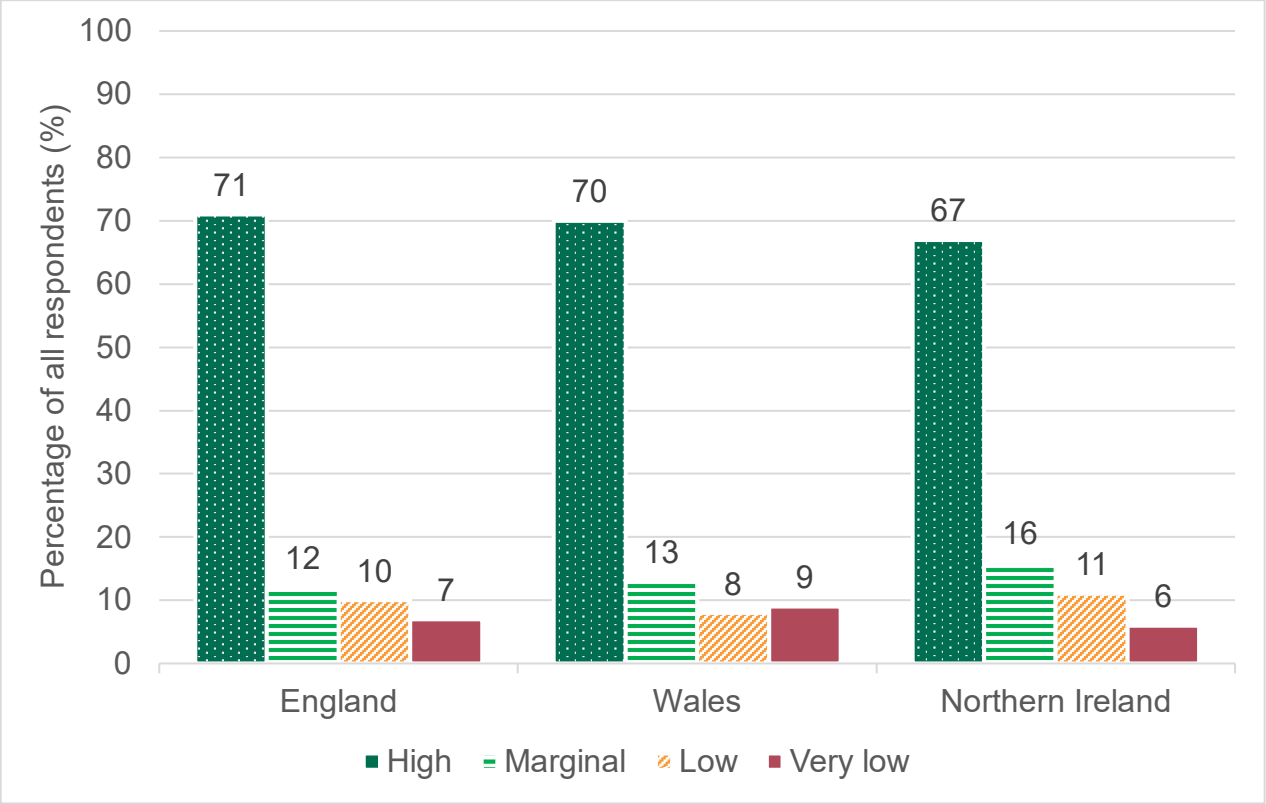
More information on how food security is measured and how classifications are assigned and defined can be found in Annex A and the USDA Food Security website.

[16] Question: Thinking about food in the UK [question wording variation in Northern Ireland: the UK and Ireland] today, how concerned, if at all, do you feel about each of the following topics? A) Affordability of food B) Food produced in [in England and Wales: the UK; [in Northern Ireland: the UK and Ireland] being safe and hygienic C) Food from outside [in England and Wales: the UK; in Northern Ireland: the UK and Ireland] being safe and hygienic D) Food produced in [in England and Wales: the UK; in Northern Ireland: the UK and Ireland] being what it says it is E) Food from outside [in England and Wales: the UK; in Northern Ireland: the UK and Ireland] being what it says it is F) Food being produced sustainably G) The availability of a wide variety of food H) Animal welfare in the food production process I) Ingredients and additives in food J) Genetically modified (GM) food. Base= 3745, all online respondents. Please note: some question wording was modified for respondents in England, Wales and Northern Ireland.

Food security

Across England, Wales, and Northern Ireland, 82% of respondents were classified as food secure (70% high, 12% marginal) and 18% of respondents were classified as food insecure (10% low, 7% very low)[17].

Figure 6. Food security in England, Wales and Northern Ireland.

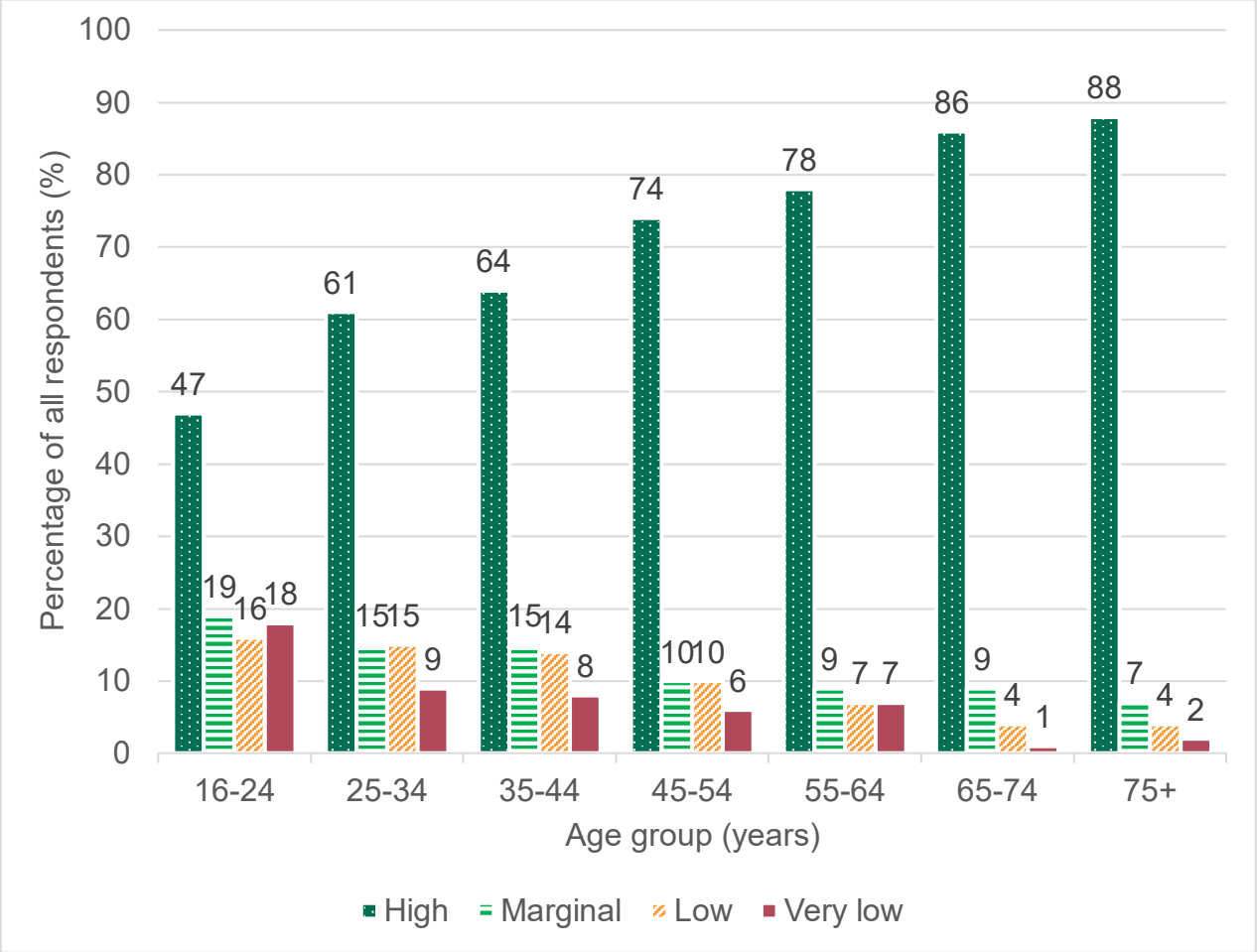


Source: Food and You 2: Wave 4

Food security levels were comparable across England, Wales, and Northern Ireland**. Around 8 in 10 respondents were food secure (i.e. had high or marginal food security) in England (82%), Wales (83%) and Northern Ireland (82%). Approximately 1 in 6 respondents were food insecure (i.e. had low or very low food security) in England (18%), Wales (17%) and Northern Ireland (18%) (Figure 6).

[17] Question/Responses: Derived variable, see USDA Food Security guidance and Technical Report. Base= 5796, all respondents. Please note: See Annex A for information about the classifications and definitions of food security levels.

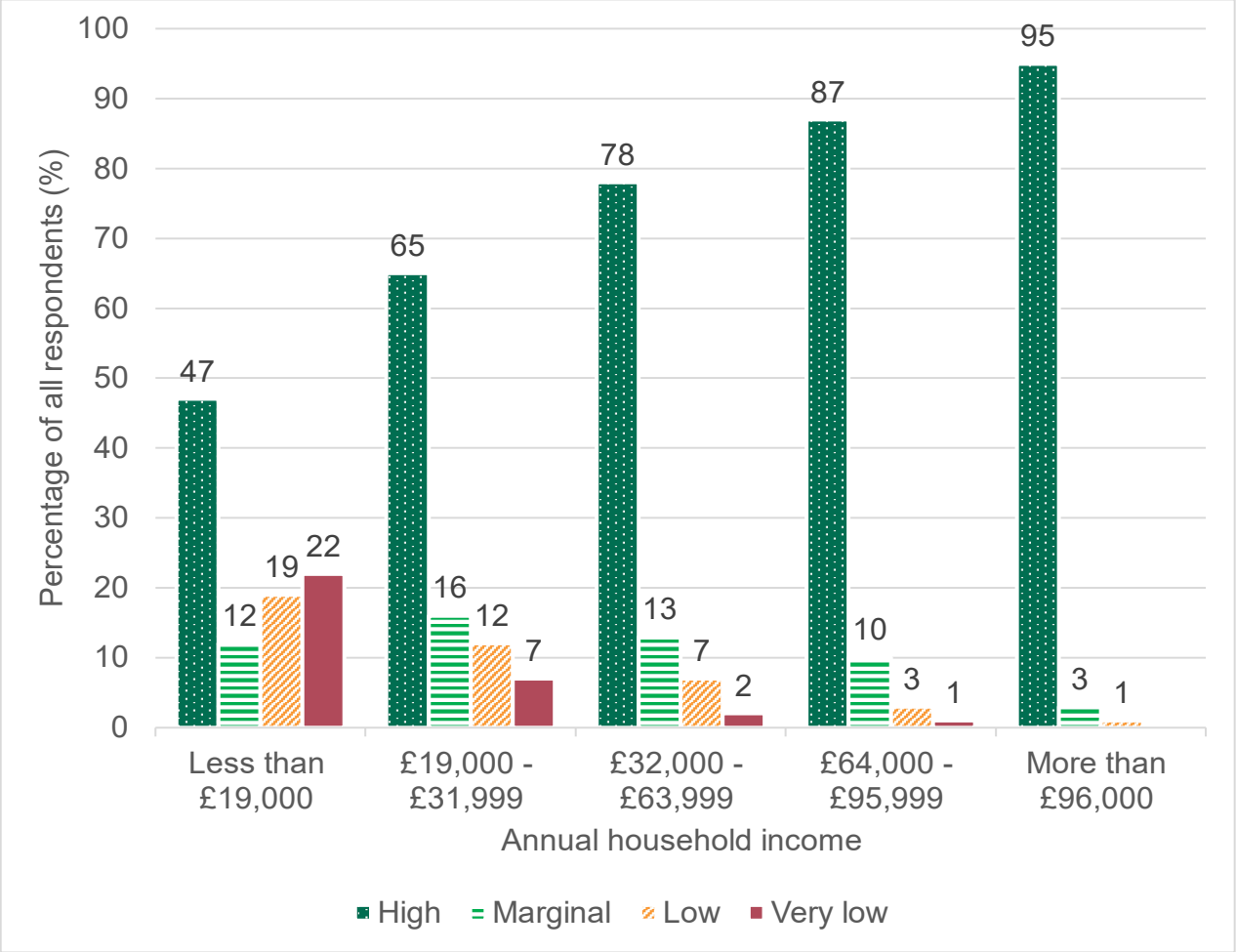
Figure 7. Food security by age group.



Source: Food and You 2: Wave 4

Food security varied by age group with older adults being more likely to report that they were food secure and less likely to report that they were food insecure than younger adults. For example, 34% (16% low, 18% very low security) of respondents aged 16-24 years were food insecure compared to 5% of those aged 75 years and over (Figure 7).

Figure 8. Food security by annual household income.



Source: Food and You 2: Wave 4

Food security was associated with household income. Respondents with a higher income were more likely to report food security than those with a lower income. For example, 95% of respondents with an income over £96,000 reported high food security, compared to 47% of those with an income below £19,000 (Figure 8). Four in ten (40%) of those with an annual household income of less than £19,000 reported low or very low food security.

The reported level of food security also varied between different categories of people in the following ways:

- Household size: smaller households (for example, 86% of single person households) were more likely to report that they were food secure compared to households with more than 5 people (72%).

- Children under 16 in household: 85% of households without children under 16 years reported that they were food secure compared to 75% of households with children under 16 years.

- NS-SEC: food security was more likely to be reported by respondents in most occupational groups (for example, 88% of those in managerial, administrative and professional occupations) compared to those who were in semi-routine and routine occupations (73%), and full-time students (71%). Those who were long term unemployed and/or had never worked (44%) were least likely to be food secure.

- Ethnic group: white respondents (85%) were more likely to report being food secure compared to Asian or British Asian (66%) respondents.

- Long term health condition: respondents who did not have a long-term health condition (88%) were more likely to report being food secure compared to those who had a long-term health condition (73%).

Food bank use

Respondents were asked if they or anyone else in their household had received a free parcel of food from a food bank or other emergency food provider in the last 12 months. Most respondents (93%) reported that they had not used a food bank or other emergency food provider in the last 12 months, with 4% of respondents reporting that they had[18].

Respondents who had received a food parcel from a food bank or other provider were asked to indicate how often they had received this in the last 12 months. Of these respondents, around a third (34%) had received a food parcel on only one occasion in

[18] Question: In the last 12 months, have you, or anyone else in your household, received a free parcel of food from a food bank or other emergency food provider? Responses Yes, No, Prefer not to say. Base= 3745, all online respondents.

the last 12 months, 51% had received a food parcel on more than one occasion but less often than every month, and 8% had received a food parcel every month or more often[19].

School meals, meal clubs and Healthy Start vouchers

Respondents with children aged 7-15 years in their household were asked whether these children receive free school meals. Most respondents (80%) with a child(ren) aged 7-15 years in their household reported that the child(ren) do not receive free school meals. Approximately one in five (19%) respondents reported that the child or children receive free school meals[20].

Respondents with children aged 7-15 years in their household were asked whether the child(ren) had attended a school club where a meal was provided in the last 12 months. Most respondents (74%) reported that the child(ren) in their household had not attended one of these clubs in the last 12 months. 1 in 7 (15%) respondents reported that the child(ren) in their household had attended a breakfast club before school, 8% reported that the child(ren) had attended an after-school club where they received a meal, and 6%

[19] Question: How often in the past 12 months have you, or anyone else in your household, received a free food parcel from a food bank or other emergency food provider? Responses: Only once in the last year, Two or three times in the last year, Four to six times in the last year, More than six times but not every month, Every month or more often, Don't know, Prefer not to say. Base= 123, all respondents where anyone in household has used a food bank or emergency food or received a free food parcel from a food bank or other emergency food provider in the last 12 months.

[20] Question: Does any child receive free school meals? Responses: Yes, No, Don't know, Prefer not to say. Base= 1020, all respondents who had child(ren) aged 7 - 15 living in the household. The eligibility criteria for free school meals varies between England, Wales and Northern Ireland.

reported that the child(ren) had attended a lunch and activity club held during the school holidays[21].

Respondents who had children aged 0-4 years in their household or who were pregnant were asked whether they receive Healthy Start vouchers. Most respondents (87%) reported that they do not receive Healthy Start vouchers, with 6% of respondents reporting that they do[22].

[21] Question: Did your child/any of the children in your household attend any of the following in the past 12 months? Responses: A breakfast club before school, An after-school club where they also received a meal (tea/dinner), A lunch and activity club that ran only during school holidays, None of these, Don't know. Base= 792, all respondents with child(ren) aged 5 - 15 in the household.

[22] Question: Do you receive Healthy Start vouchers for yourself or your children? Responses: Yes, No, Don’t know, Prefer not to say. Base= 469, all online respondents who are pregnant or have child(ren) aged 0 - 4 in household, and all those who completed the paper questionnaire and have child(ren) aged 0 - 4 years living in the household.

Chapter 4: Eating out and takeaways

Introduction

The Food Hygiene Rating Scheme (FHRS) helps people make informed choices about where to eat out or shop for food by giving clear information about the businesses' hygiene standards. Ratings are typically given to places where food is supplied, sold or consumed, including restaurants, pubs, cafés, takeaways, food vans and stalls.

The FSA runs the scheme in partnership with local authorities in England, Wales and Northern Ireland. A food safety officer from the local authority inspects a business to check that it follows food hygiene law so that the food is safe to eat. Businesses are given a rating from 0 to 5. A rating of 5 indicates that hygiene standards are very good and a rating of 0 indicates that urgent improvement is required.

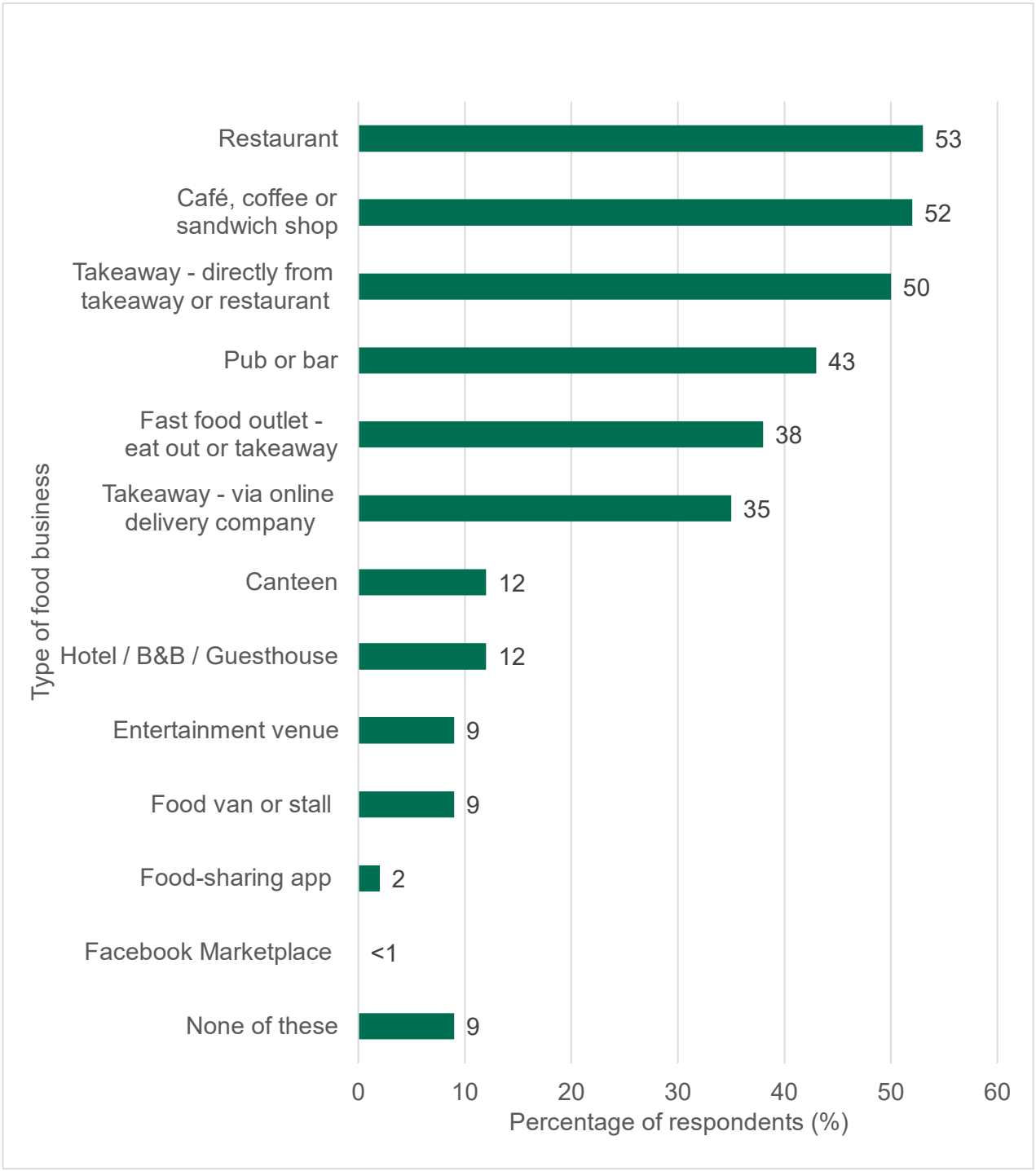
Food businesses are provided with a sticker which shows their FHRS rating. In England businesses are encouraged to display their FHRS rating, however in Wales and Northern Ireland food businesses are legally required to display their FHRS rating[23]. FHRS ratings are also available on the FSA website.

This chapter provides an overview of respondents' eating out and takeaway ordering habits, the factors that are considered when deciding where to order a takeaway from, and recognition and use of the FHRS.

[23] Legislation for the mandatory display of FHRS ratings was introduced in November 2013 in Wales and October 2016 in Northern Ireland.

Prevalence of eating out and ordering takeaways

Figure 9. Type of food business respondents had eaten at or ordered food from in the previous 4 weeks.



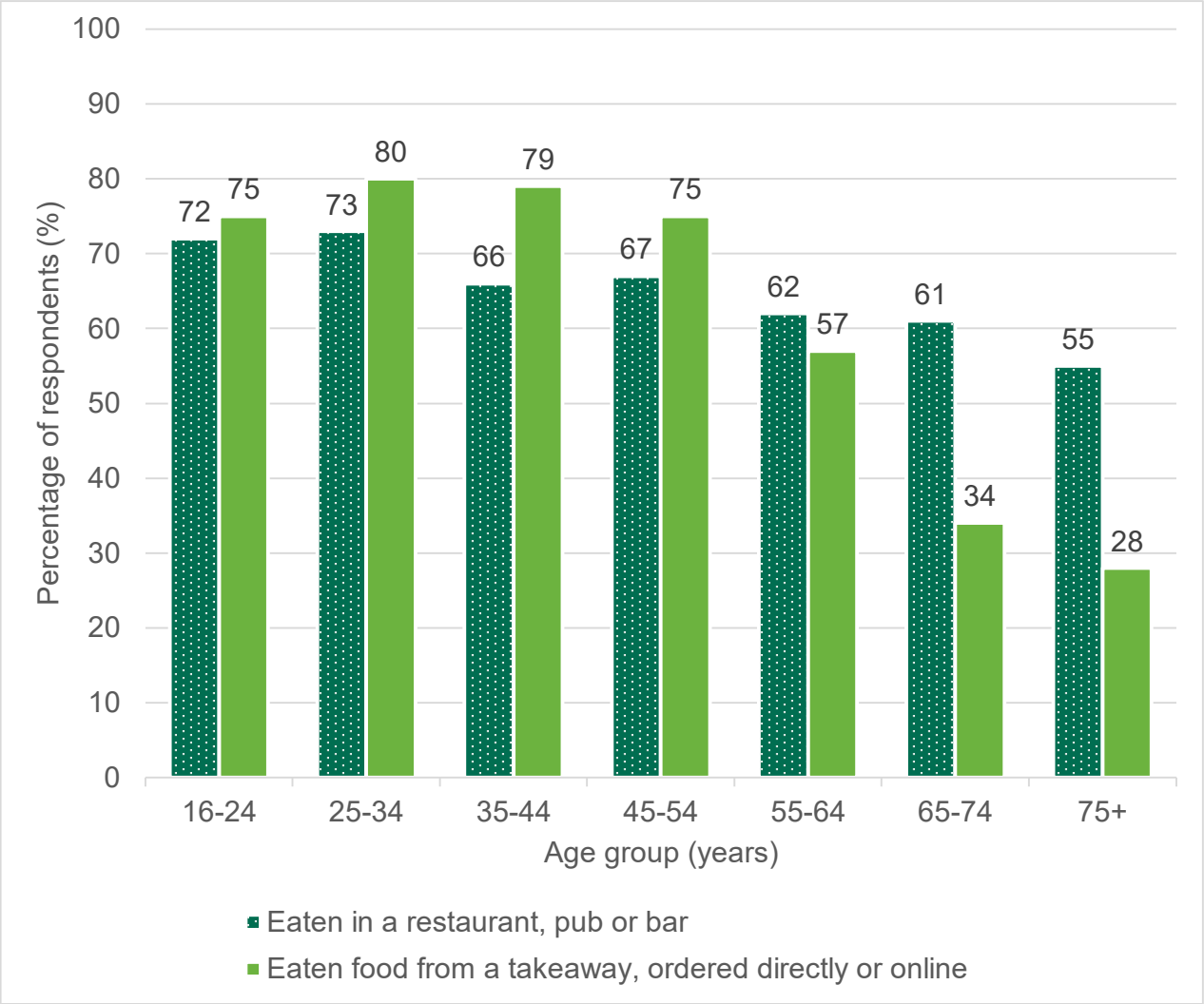
Source: Food & You 2: Wave 4

Respondents were asked where they had eaten out or ordered food from in the previous 4 weeks. Around half had eaten out in a restaurant (53%), from a café, coffee shop or sandwich shop (either to eat in or take out) (52%) or ordered a takeaway directly from a

takeaway shop or restaurant (50%) and 43% had eaten out in a pub or bar. Over a third of respondents had eaten food from a fast-food outlet (either to eat in or take out) (38%) or ordered a takeaway from an online food delivery company (for example, Just Eat, Deliveroo, Uber Eats) (35%). Around 1 in 10 (9%) respondents had not eaten food from any of the listed food businesses in the previous 4 weeks (Figure 9)[24].

[24] Question: In the last 4 weeks, have you eaten food... ? (Select all the apply) Responses: Ordered a takeaway directly from a takeaway shop or restaurant, From a café, coffee shop or sandwich shop (either to eat in or take out), Ordered a takeaway from an online food delivery company (for example, Just Eat, Deliveroo, Uber Eats), From a fast food outlet (either to eat in or take out), In a restaurant, In a pub/ bar, From a canteen (for example, at work, school, university, or hospital), From a mobile food van or stall, In a hotel, B&B or guesthouse, From an entertainment venue (for example, cinema, bowling alley, sports club), From a food-sharing app (for example, Olio or Too Good To Go), From Facebook Marketplace (for example, pre-prepared food or meals), None of these. Base= 4755, all online respondents and those answering the Eating Out postal questionnaire (see Annex A). Please note, percentages shown do not add up to 100% as multiple responses could be selected.

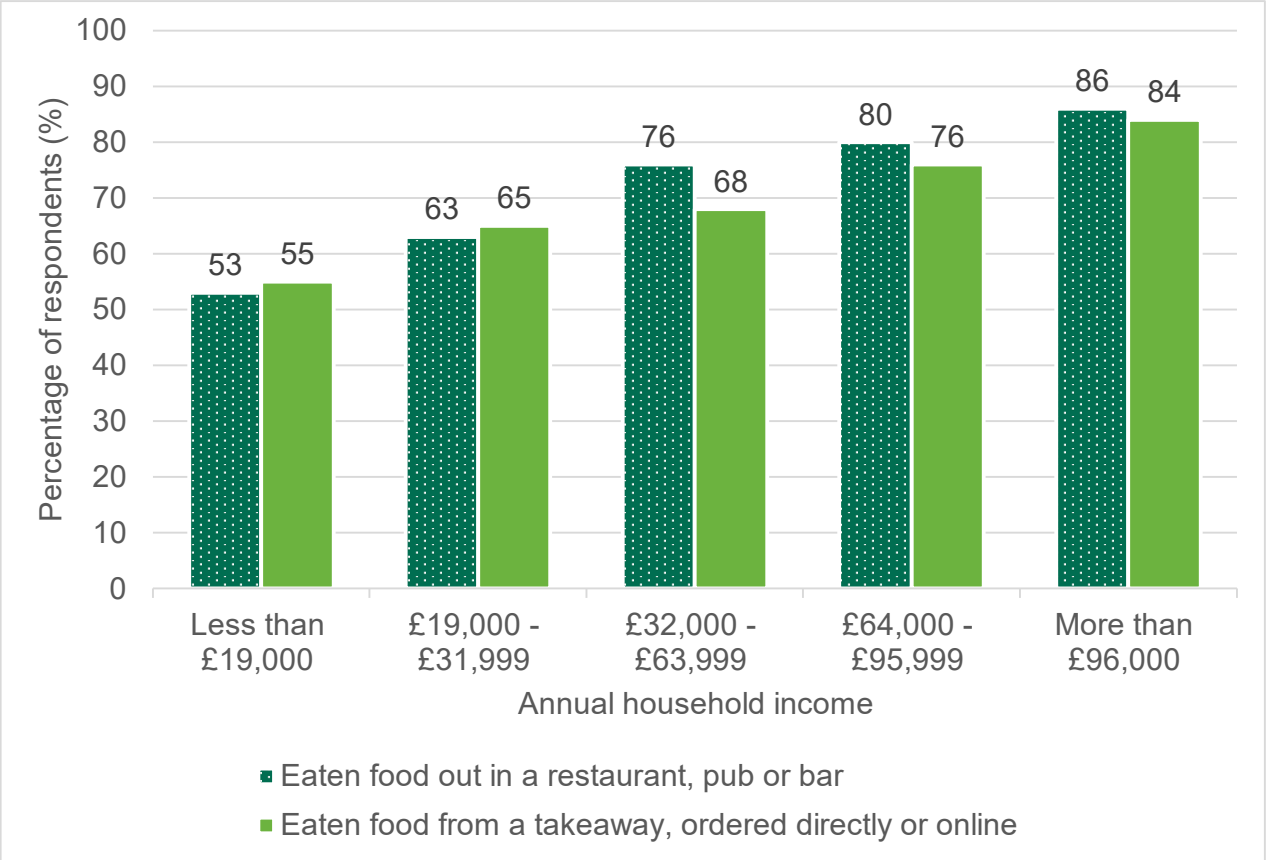
Figure 10. Prevalence of eating out in a restaurant, pub or bar, or from a takeaway by age group in the previous 4 weeks.



Source: Food and You 2: Wave 4

Younger respondents were more likely to have eaten out in a restaurant, pub or bar, or from a takeaway (ordered directly or online) in the previous 4 weeks compared to older respondents. For example, 73% of respondents aged 25-34 years had eaten out in a restaurant, pub or bar compared to 55% of those aged 75 years or over. Similarly, 80% of respondents aged 25-34 years had eaten food from a takeaway (ordered directly or online) compared to 28% of those aged 75 years or over (Figure 10).

Figure 11. Prevalence of eating out in a restaurant, pub or bar, or from a takeaway by annual household income in the previous 4 weeks.



Source: Food and You 2: Wave 4

Respondents with a higher household income were more likely to have eaten out in a restaurant, pub or bar, or have eaten food from a takeaway (ordered directly or online) in the previous 4 weeks compared to respondents with a lower income. For example, 86% of respondents with an income of £96,000 or over had eaten out in a restaurant, pub or bar compared to 53% of those with an income of £19,000 or below. Similarly, 84% of respondents with an income of £96,000 or over had eaten food from a takeaway (ordered directly or online) compared to 55% of those with an income of £19,000 or below (Figure 11).

The prevalence of eating out in a restaurant, pub or bar or eating food from a takeaway (ordered directly or online) in the previous 4 weeks also varied between different types of people in the following ways:

- Household size: respondents who lived in larger households were more likely to have eaten food from a takeaway then those who lived in smaller households. For

example, 80% of respondents living in 4-person households had eaten food from a takeaway compared to 40% of respondents living alone.

- Children under 16 years in household: respondents who had children in the household (77%) were more likely to have eaten food from a takeaway than those who did not have children aged 16 years or under in the household (59%). However, the prevalence of eating out in a restaurant, pub or bar did not differ between those with (66%) or without (66%) children aged 16 years or under in the household**.

- NS-SEC: full-time students and those in some occupational groups were more likely to have eaten out in a restaurant, pub or bar or have eaten food from a takeaway compared to those in other occupational groups or those who were long term unemployed and/or had never worked. For example, 74% of full-time students and 69% of those in intermediate occupations had eaten food from a takeaway compared to 60% of those in semi-routine and routine occupations and 53% of those who were long term unemployed and/or had never worked. Similarly, 75% of full-time students and 73% of those in managerial, administrative, and professional occupations had eaten out in a restaurant, pub or bar compared to 47% of those in semi-routine and routine occupations and 31% of those who were long term unemployed and/or had never worked.

- Urban/rural: respondents who lived in an urban area (66%) were more likely to have eaten food from a takeaway than those who lived in a rural area (54%). However, the prevalence of eating out in a restaurant, pub or bar did not differ between those who lived in urban (66%) or rural (66%) areas**.

- Food security: respondents with high (71%) or marginal (64%) food security were more likely to have eaten out in a restaurant, pub or bar than those with low (48%) or very low (48%) food security. However, the prevalence eating food from a takeaway did not differ greatly between those with different levels of food security (for example, 66% of those with very low food security compared to 62% of those with high food security).

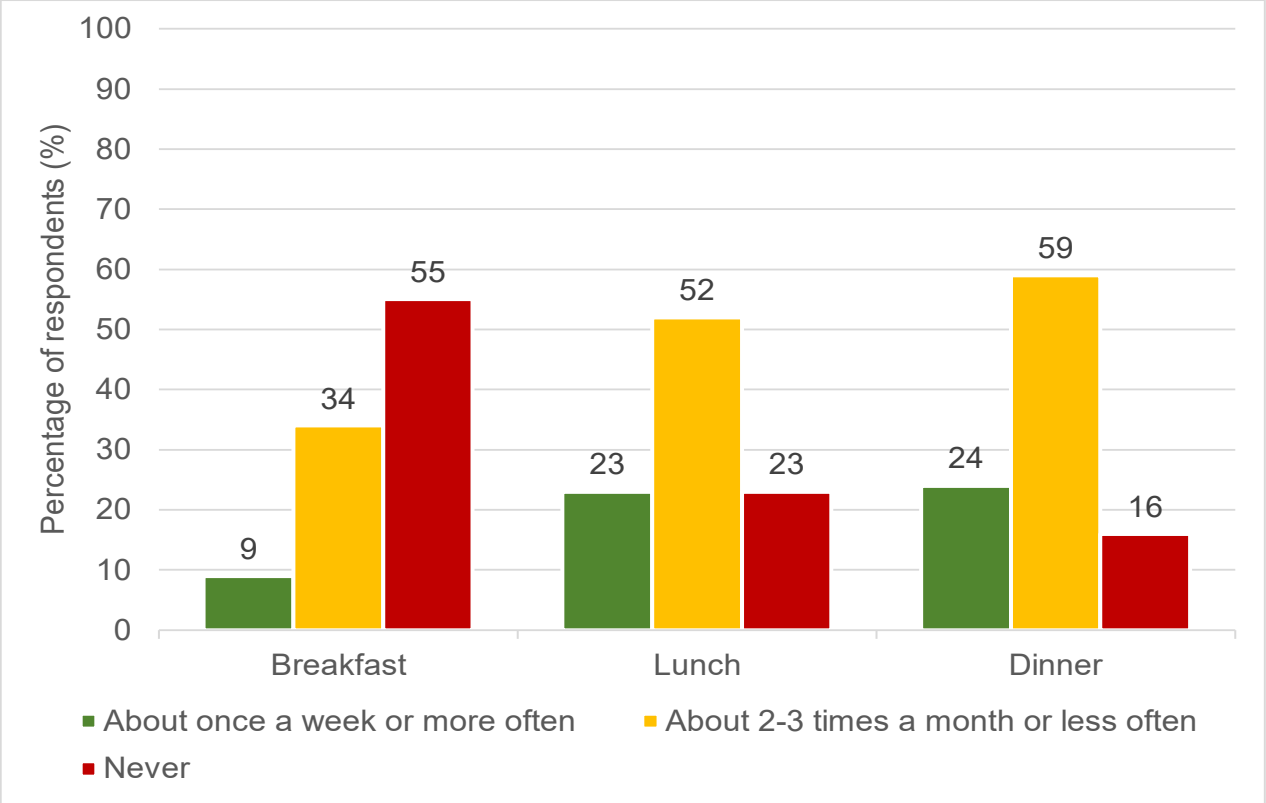
- Ethnic group: white respondents (67%) were more likely to have eaten out in a restaurant, pub or bar compared to Asian or British Asian respondents (54%),

however Asian or British Asian respondents (73%) were more likely to have eaten food from a takeaway compared to white respondents (62%).

- Long term health condition: respondents with no long-term health condition (71%) were more likely to have eaten out in a restaurant, pub or bar compared to respondents who had a long-term health condition (58%), however the prevalence of eating food from a takeaway did not differ greatly between those with (58%) or without (66%) a long-term health condition**.

Eating out and takeaways by mealtime

Figure 12. Frequency of eating out or buying food to takeout by mealtime.



Source: Food & You 2: Wave 4

Respondents were asked how often they ate out or bought food to take out for breakfast, lunch, and dinner. Respondents were least likely to eat out or buy food to take out for breakfast, with 55% of respondents never doing this. Around half of respondents (52%) reported that they ate out or bought takeout food for lunch 2-3 times a month or less often. Respondents were most likely to eat out or buy food to take out for dinner, with

59% doing this 2-3 times a month or less often and 24% doing this about once a week or more often (Figure 12)[25].

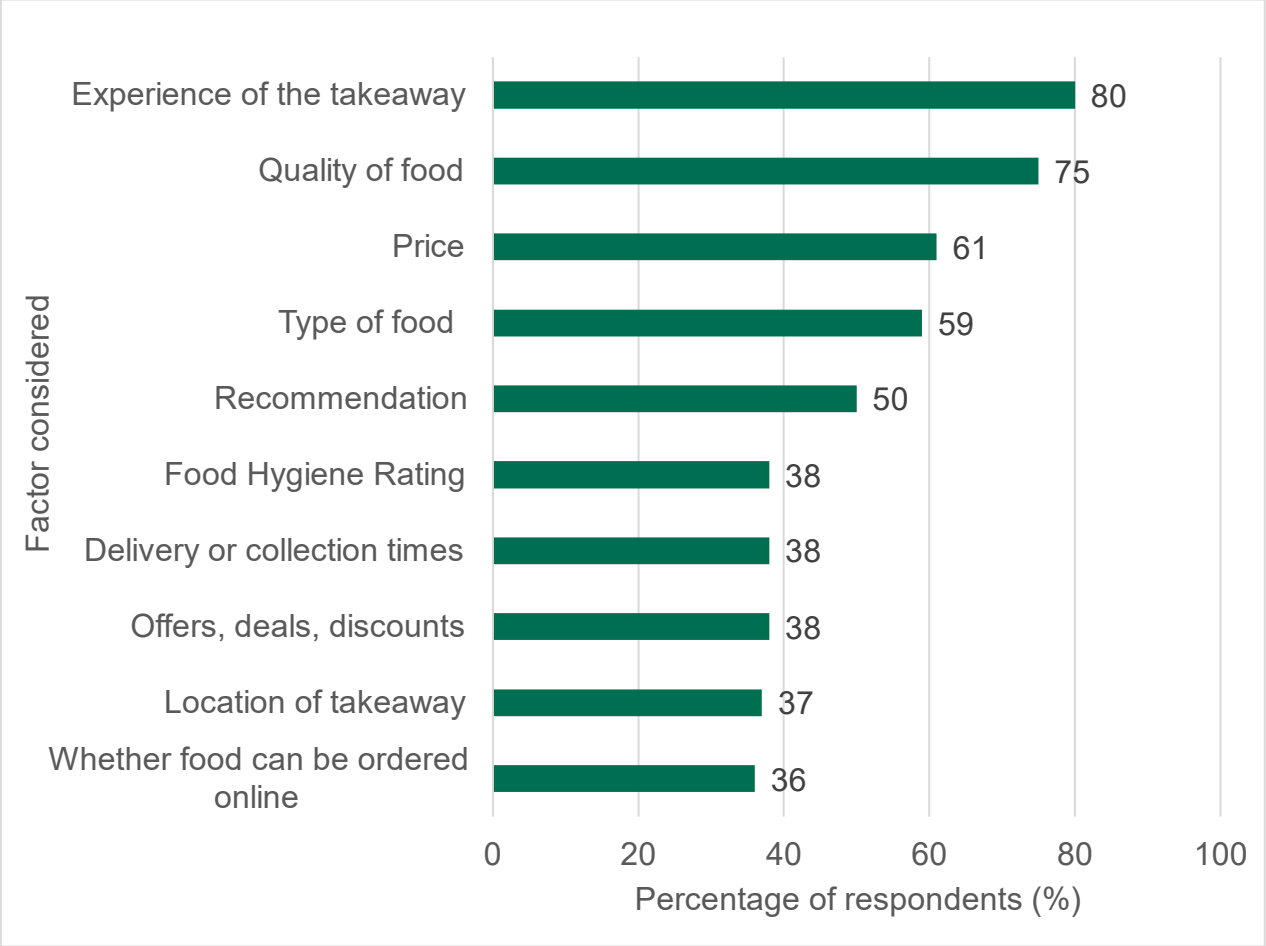
Factors considered when ordering a takeaway

Respondents were asked which factors, from a given list, they generally considered when deciding where to order a takeaway from[26].

[25] Question: At the moment, how often, if at all, do you eat out or buy food to take out for…? A) Breakfast, B) Lunch, C) Dinner. Responses: Several times a week, About once a week, About 2-3 times a month, About once a month, Less than once a month, Never, Can't remember. Base= 4755, all online respondents and those answering the Eating Out postal questionnaire.

[26] Including takeaway ordered directly from a takeaway shop or restaurant or via an online food delivery company.

Figure 13. Factors considered when ordering a takeaway.



Source: Food & You 2: Wave 4

Of those who had ordered food from a takeaway, the factors most commonly considered when deciding where to place an order were the respondents' previous experience of the takeaway (80%) and the quality of food (75%). Around 4 in 10 (38%) respondents

considered the food hygiene rating when deciding where to order a takeaway from (Figure 13)[27].

Awareness and recognition of the FHRS

Most respondents (89%) reported that they had heard of the FHRS. Over half (59%) of respondents reported that they had heard of the FHRS and had at least a bit of knowledge about it[28,29].

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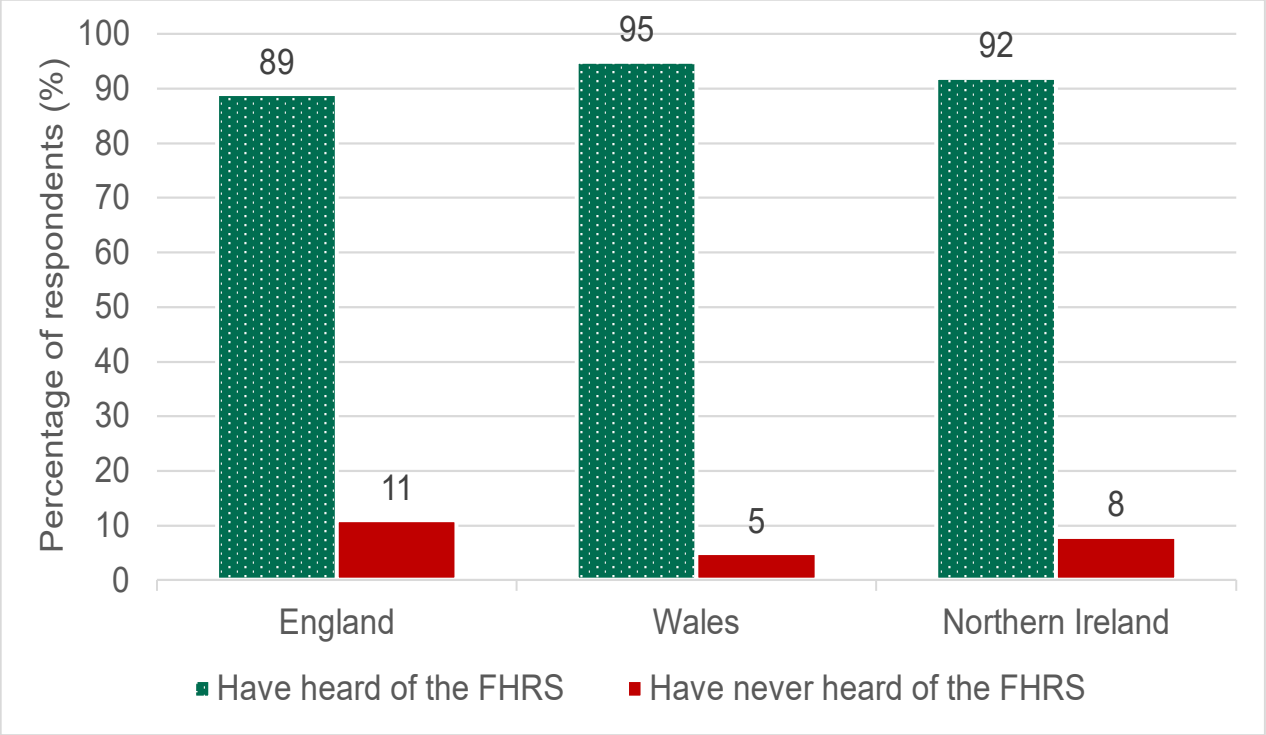
[27] Question: Generally, when ordering food from takeaways (either directly from a takeaway shop or restaurant or from an online food delivery company like Just Eat, Uber Eats or Deliveroo) what do you consider when deciding where to order from? Responses: My previous experience of the takeaway, Quality of food, Price (including cost of delivery), Type of food (for example, cuisine or vegetarian/vegan options), Recommendations from family or friends, Food Hygiene Rating, Location of takeaway, Whether there is a delivery or collection option, Offers, deals or discount available, Delivery/ collection times, Whether food can be ordered online for example, through a website or app, Reviews for example, on TripAdvisor, Google, social media, or in newspapers and magazines, Whether it is an independent business or part of a chain, Whether healthier options are provided, Whether allergen information is provided, Whether information about calories is provided, None of these, Don't know. Base= 3233, all online respondents who order takeaways.

[28] Question: Have you heard of the Food Hygiene Rating Scheme? Responses: Yes, I've heard of it and know quite a lot about it, Yes, I've heard of it and know a bit about it, Yes, I've heard of it but don't know much about it, Yes, I've heard of it but don't know anything about it, No, I've never heard of it. Base = 4755, all online respondents and those answering the Eating Out postal questionnaire.

[29] Responses to other FHRS questions not included in this report are available in the full dataset and tables. A more detailed FHRS report will be published separately.

Figure 14. Percentage of respondents who had heard of the FHRS by country.



Source: Food and You 2: Wave 4

Most respondents living in England (89%), Wales (95%), and Northern Ireland (92%) had heard of the FSA (Figure 14)**.

Respondents in Wales (74%) were more likely to report that they had heard of the FHRS and had at least some knowledge of the FHRS compared to those in England (57%) and Northern Ireland (65%)**.

When shown an image of the FHRS sticker, most (88%) respondents reported that they had seen the FHRS sticker before. Recognition of the FHRS sticker was comparable across England (87%), Wales (95%) and Northern Ireland (94%)[30]**.

[30] Question: Have you ever seen this sticker before? Responses: Yes, No, Don't know/ Not sure. Base = 4755, all online respondents and those answering the Eating Out postal questionnaire.

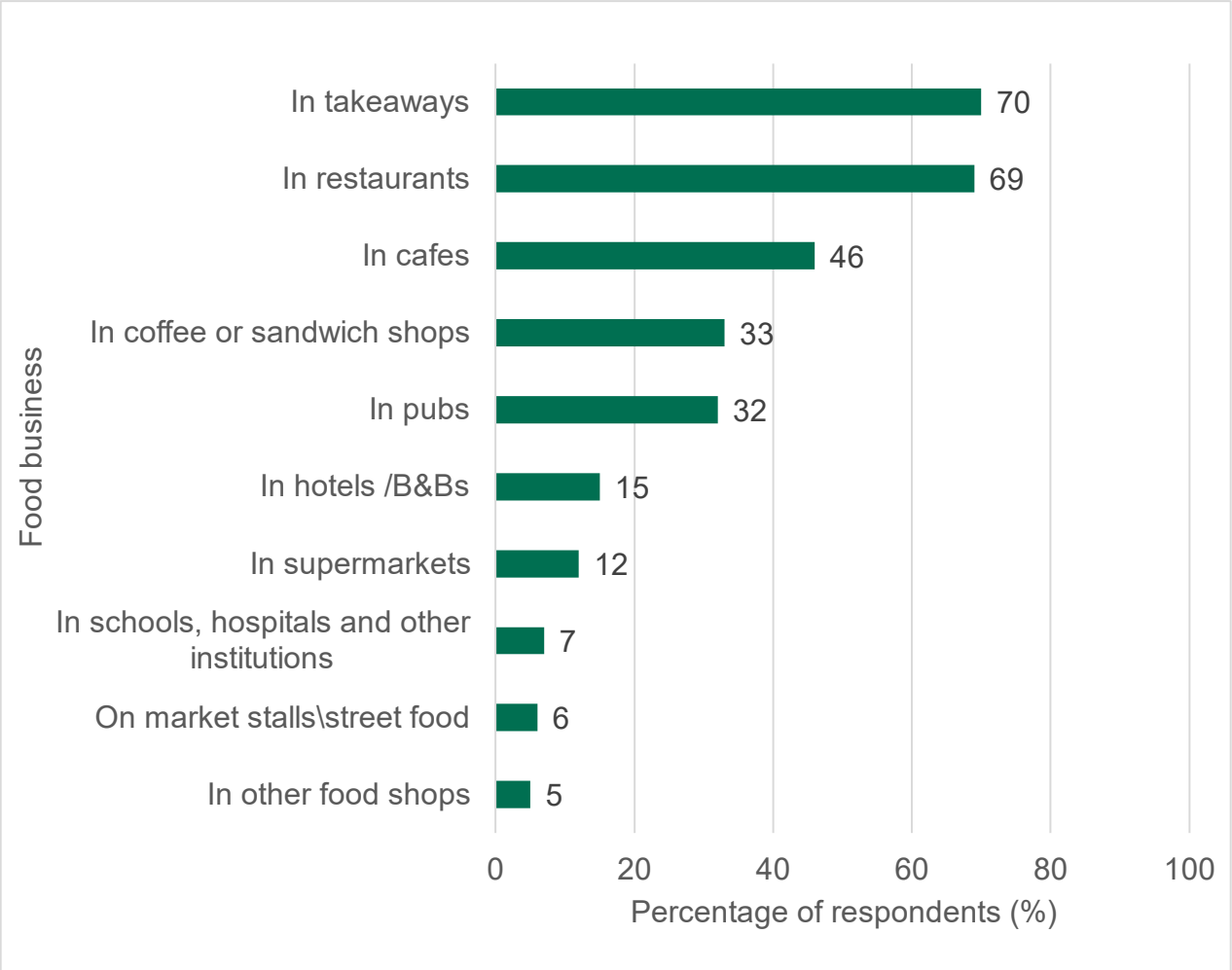
FHRS usage

Respondents were asked if they had checked the hygiene rating of a food business in the last 12 months. Around 4 in 10 (41%) respondents reported checking the food hygiene rating of a business in the previous 12 months[31].

Respondents living in Wales (54%) were more likely to have checked the hygiene rating of a food business in the last 12 months compared to respondents in England (40%) and Northern Ireland (46%)**.

[31] Question: In the last 12 months, have you checked the hygiene rating of a food business? You may have checked a rating at the business premises, online, in leaflets or menus whether or not you decided to purchase food from there. Responses: Yes, I have checked the Food Hygiene Rating of a food business, No, I have not checked the Food Hygiene Rating of a food business, Don't know. Base = 4755, all online respondents and those answering the Eating Out postal questionnaire.

Figure 15. Food businesses where respondents had checked the food hygiene rating in last 12 months.



Source: Food & You 2: Wave 4

Respondents who said they had checked the hygiene rating of a food business in the last 12 months were asked what types of food businesses they had checked. The most common types of food business which respondents had checked the food rating of were takeaways (70%) and restaurants (69%). Respondents were less likely to report that they

had checked the food hygiene rating of cafés (46%), coffee or sandwich shops (33%) or pubs (32%) (Figure 15)[32].

Chapter 5: Food allergies, intolerances and other hypersensitivities

Introduction

'Food hypersensitivity' is a term that refers to a bad or unpleasant physical reaction which occurs as a result of consuming a particular food. There are different types of food hypersensitivity including a food allergy, food intolerance and coeliac disease[33].

A **food allergy** occurs when the immune system (the body's defence) mistakes the proteins in food as a threat. Symptoms of a food allergy can vary from mild symptoms to very serious symptoms, and can include itching, hives, vomiting, swollen eyes and airways, or anaphylaxis which can be life threatening.

Food intolerance is difficulty in digesting specific foods which causes unpleasant reactions such as stomach pain, bloating, diarrhoea, skin rashes or itching. Food intolerance is not an immune condition and is not life threatening.

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[32] Question: In which of the following kinds of food businesses have you checked the hygiene ratings in the last 12 months? Responses: In takeaways, In restaurants, In cafés, In coffee or sandwich shops, In pubs, In hotels & B&Bs, In supermarkets, In other food shops, In schools, hospitals and other institutions, On market stalls/street food, Manufacturers (Business-to-Business traders), Somewhere else, Don't know. Base = 2085, all online respondents and all those who completed the Eating Out postal questionnaire who have checked the Food Hygiene Rating of a food business in the last 12 months.

[33] FSA Explains: Food hypersensitivities. Overview: Food Allergy, NHS. Food Intolerance, NHS. Overview: Coeliac disease, NHS.

Coeliac disease is an autoimmune condition caused by gluten, a protein found in wheat, barley and rye and products using these as ingredients. The immune system attacks the small intestine which damages the gut and reduces the ability to absorb nutrients. Symptoms of coeliac disease can include diarrhoea, abdominal pain and bloating.

The FSA is responsible for allergen labelling and providing guidance to people with food hypersensitivities. By law, food businesses in the UK must inform customers if they use any of the 14 most potent and prevalent allergens[34] in the food and drink they provide.

To help consumers make safe and informed choices, food businesses can voluntarily provide information about the unintentional presence of 14 most potent and prevalent allergens, for example 'may contain' or 'produced in a factory with'. This is called precautionary allergen labelling (PAL). PAL information can be provided verbally or in writing but should only be provided where there is an unavoidable risk of allergen cross-contamination that cannot be sufficiently controlled through risk management actions.

This chapter provides an overview of respondents' understanding of food allergies and intolerances, the self-reported prevalence and diagnosis of food hypersensitivities, and experiences of eating out or ordering a takeaway among those with a hypersensitivity.

Prevalence and diagnosis of food hypersensitivities

Around a quarter (24%) of respondents reported that they suffer from a bad or unpleasant physical reaction after consuming certain foods or avoid certain foods because of the bad or unpleasant physical reaction they might cause[35].

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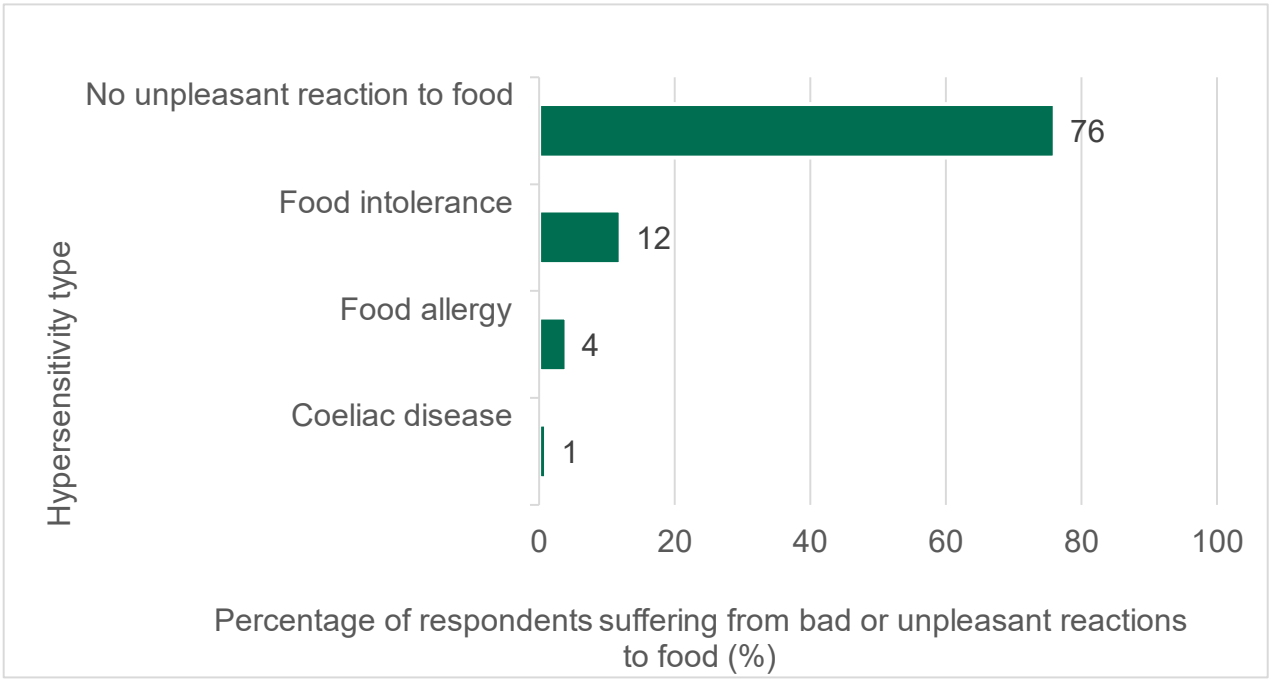
[34] Allergens: celery, cereals containing gluten (such as barley and oats), crustaceans (such as prawns, crabs and lobsters), eggs, fish, lupin, milk, molluscs (such as mussels and oysters), mustard, peanuts, sesame, soybeans, sulphur dioxide and sulphites and tree nuts (such as almonds, hazelnuts, walnuts, Brazil nuts, cashews, pecans, pistachios and macadamia nuts).

[35] Question: Do you suffer from a bad or unpleasant physical reaction after consuming certain foods, or avoid certain foods because of the bad or unpleasant physical reaction they might cause? Responses: Yes, No, Don't know, Prefer not to say. Base= 5796, all respondents.

The prevalence of bad or unpleasant physical reactions to food varied between different groups of people in the following ways:

- Gender: women (29%) were more likely to report a bad or unpleasant physical reaction to food than men (17%).
- NS-SEC: respondents who were full-time students (30%) or long-term unemployed and/or had never worked (29%) were more likely to report a bad or unpleasant physical reaction to food, compared to respondents in semi-routine and routine occupations (16%).
- Food insecurity: respondents who had very low food security (32%) were more likely to report a bad or unpleasant physical reaction to food, compared to respondents who had high (22%) or low (22%) food security.

Figure 16. Prevalence of different types of food hypersensitivity.



Source: Food and You 2: Wave 4

Most respondents (76%) reported that they did not have a food hypersensitivity. Just over 1 in 10 (12%) respondents reported that they had a food intolerance, 4% reported having a food allergy, and 1% reported having coeliac disease (Figure 16)[36].

Diagnosis of food hypersensitivities

Respondents who reported having a bad or unpleasant reaction were asked how they had found out about their condition. More than 2 in 10 (22%) respondents who had a food hypersensitivity had been diagnosed by an NHS or private medical practitioner and 4% had been diagnosed by alternative or complementary therapist but not NHS/private medical practitioner. However, 10% had used other methods and most respondents (74%) had not received any diagnosis.[37].

Around a third (34%) of respondents who reported having a food allergy had been diagnosed by an NHS or private medical practitioner compared to 17% of those with a food intolerance. Over three-quarters (78%) of respondents who reported a food intolerance had noticed that a food causes them problems, but not been formally diagnosed with a specific condition, compared to 64% of those with an allergy.

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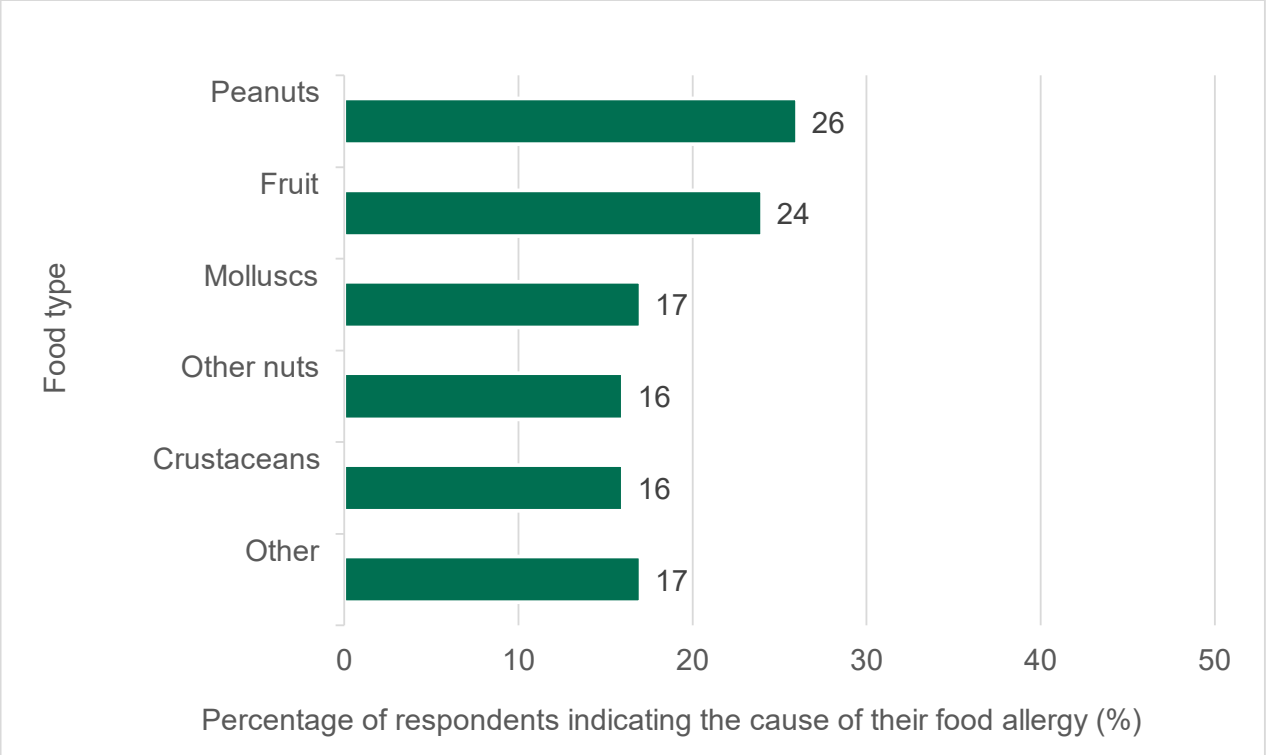
[36] Question/ Responses: Derived variable, see data tables (REACTYPE_1 to REACTYPE_18 combined NET) and Technical Report. Base= 5796, all respondents.
[37] Question: How did you find out about your problem with these foods? Responses: I have been diagnosed by an NHS or private medical practitioner (for example, GP, dietician, allergy specialist in a hospital or clinic), I have been diagnosed by an alternative or complementary therapist (for example, homeopath, reflexologist, online or walk-in allergy testing service), I have noticed that this food causes me problems, but I have not been formally diagnosed with a specific condition, Other. Base= 1322, all respondents who suffer from a bad or unpleasant physical reaction after consuming certain foods, or avoid certain foods because of the bad or unpleasant physical reaction they might cause.

Foods most likely to cause unpleasant reactions

Respondents who reported that they suffered from a bad or unpleasant physical reaction after consuming certain foods or avoided certain foods because of the bad or unpleasant physical reaction it might cause were asked to which foods they experienced reactions.

Figure 17. The five food groups most likely to cause allergic reactions.

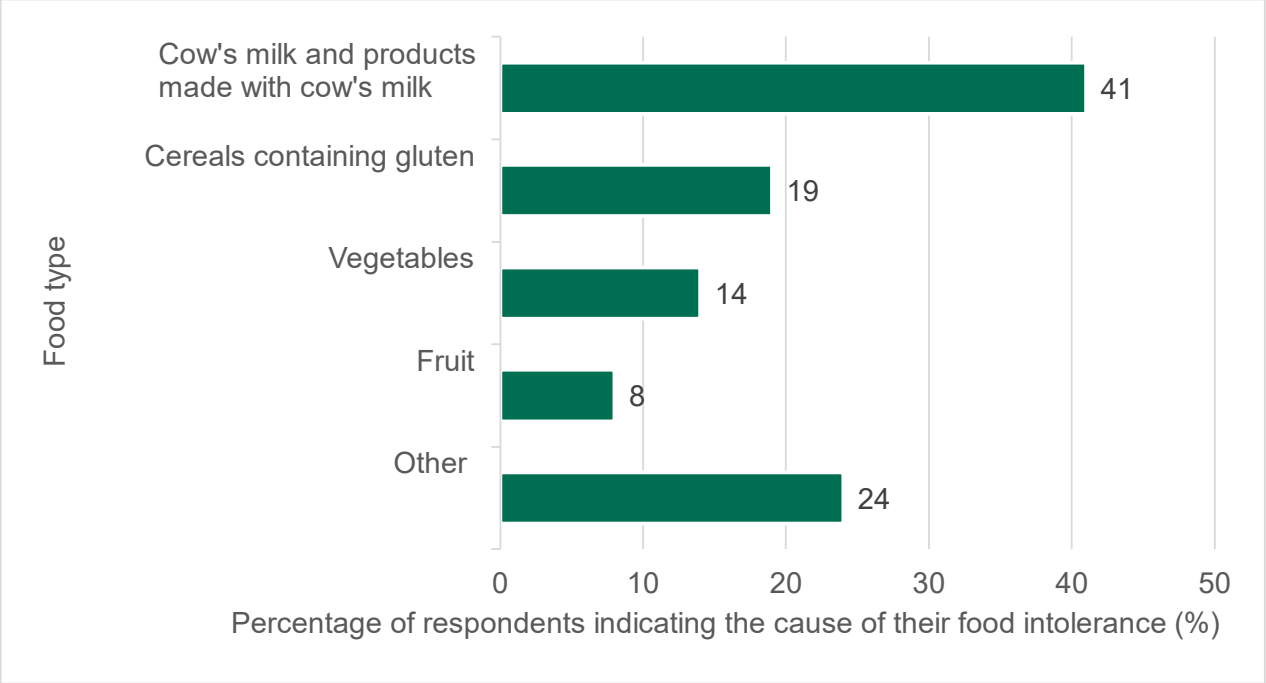


Source: Food and You 2: Wave 4

Amongst the respondents who reported having a food allergy, the most common foods reported as causing a reaction were peanuts (26%) and fruit (24%). Other common allergens were molluscs (for example, mussels, snails, squid) (17%), other nuts (for example almonds, hazelnuts, walnuts) (16%) and crustaceans, (for example, crabs, lobster, prawns) (16%). However, almost 2 in 10 (17%) respondents reported an allergy to a food which was not in the given list, which included the 14 most potent and prevalent allergens (Figure 17)[38].

[38] Questions/Respondents: Derived variable, see data tables (REACSOURCAL) and Technical Report. Base= 154.

Figure 18. The five food groups most likely to cause a food intolerance.



Source: Food and You 2: Wave 4

Amongst the respondents who reported having a food intolerance, the most common foods reported as causing intolerance were cow's milk and products made with cow's milk (41%) and cereals containing gluten (19%). Around a quarter (24%) reported an intolerance to other foods, which were not listed in the questionnaire (Figure 18)[39].

Eating out with a food hypersensitivity

The FSA provides guidance for food businesses on providing allergen information. Food businesses in the retail and catering sector are required by law to provide allergen information and to follow labelling rules. The type of allergen information which must be provided depends on the type of food business. However, all food business operators must provide allergen information for prepacked and non-prepacked food and drink.

[39] Questions/Respondents: Derived variable, see data tables (REACSOURCIN) and Technical Report. Base= 460.

Foods which are pre-packed or pre-packed for direct sale (PPDS) are required to have a label with a full ingredients list with allergenic ingredients emphasised.[40].

How often people checked allergen information in advance when eating somewhere new

Respondents who suffer from a bad or unpleasant physical reaction after consuming certain foods were asked how often, if at all, they checked in advance that information was available which would allow them to identify food that might cause them a bad or unpleasant reaction when they ate out or ordered a takeaway from somewhere new.

Around 2 in 10 (21%) respondents always checked in advance that information was available which would allow them to identify food that might cause them a bad or unpleasant reaction, and around 4 in 10 (42%) respondents checked this information was available less often (i.e., most of the time or less often). However, over a third (37%) of respondents never checked in advance that information was available which would allow them to identify food that might cause them a bad or unpleasant reaction[41].

Availability and confidence in allergen information when eating out or ordering takeaways

Respondents who suffer from a bad or unpleasant physical reaction after consuming certain foods were asked how often information which allowed them to identify food that

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[40] Allergen guidance for food businesses, FSA.

[41] Question: When eating out or ordering food from somewhere new, how often, if at all, do you check in advance that information is available allowing you to identify food that might cause you a bad or unpleasant physical reaction? Responses: Always, Most of the time, About half of the time, Occasionally, Never, Don't know. Base= 1246, all online respondents who eat out or buy food to take away and have a food reaction, and all postal respondents, who suffer from a bad or unpleasant physical reaction after consuming certain foods, or avoid certain foods because of the bad or unpleasant physical reaction they might cause who eat out or order takeaways.

might cause them a bad or unpleasant reaction was readily available when eating out or buying food.

More than 1 in 10 (13%) respondents reported that this information was always readily available and around two-thirds (68%) of respondents reported that this information was available less often (i.e., most of the time or less often). However, 9% of respondents reported that this information was never readily available when they ate out or bought food to take away[42].

Respondents were asked how often they asked a member of staff for more information when it is not readily available. Around 2 in 10 (22%) respondents reported that they always asked staff for more information, whilst 43% did this less often (i.e., most of the time of less often), and 32% never asked staff for more information[43].

Respondents were asked how comfortable they felt asking a member of staff for more information about food that might cause them a bad or unpleasant physical reaction. Around 7 in 10 (72%) of respondents reported that they were comfortable (i.e., very comfortable or fairly comfortable) asking staff for more information, however 17% of

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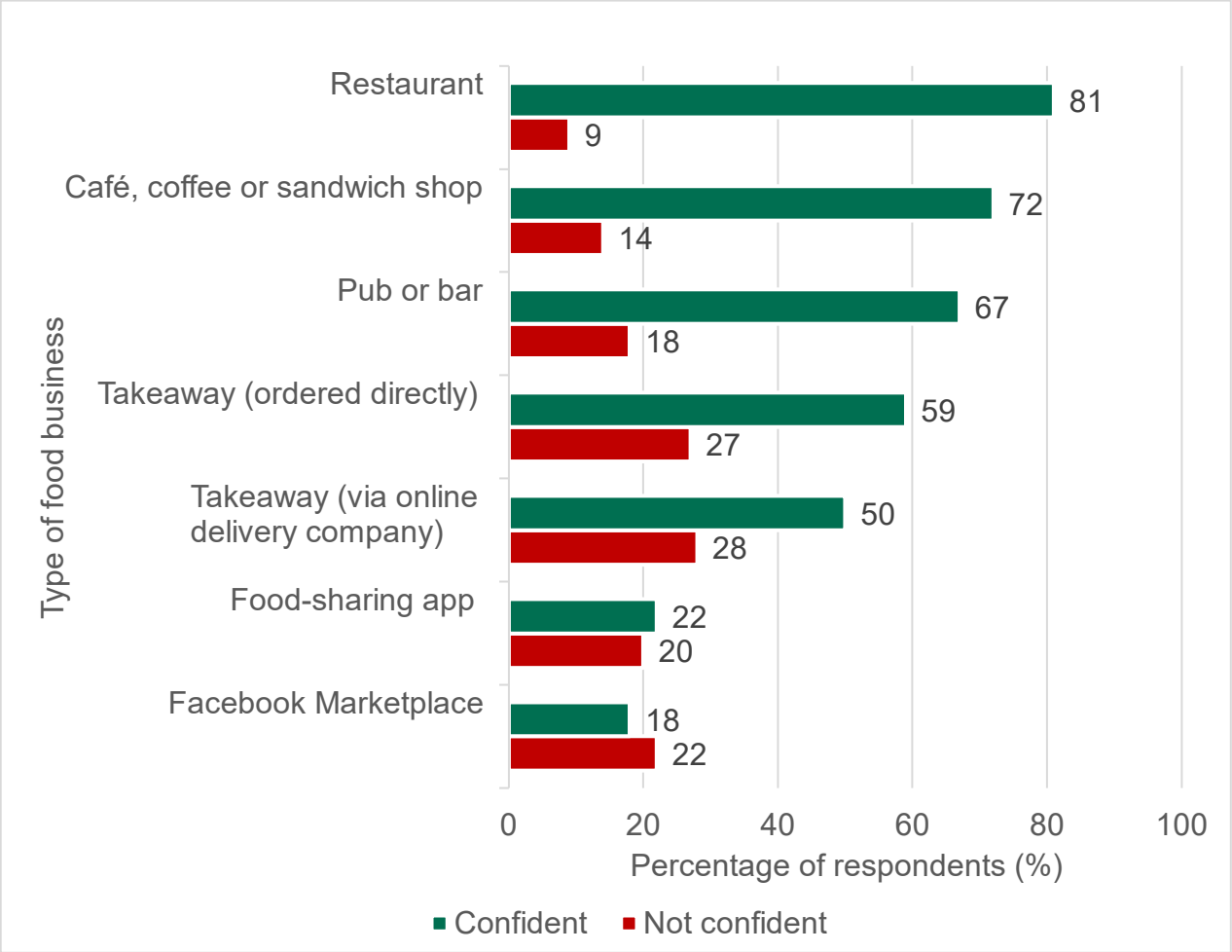
[42] Question: When eating out or buying food to take out, how often, if at all, is the information you need to help you identify food that might cause you a bad or unpleasant physical reaction readily available? Responses: Always, Most of the time, About half of the time, Occasionally, Never, Don’t know. Base= 1244, online respondents who eat out or buy food to take away and have a food reaction, and all postal respondents, who suffer from a bad or unpleasant physical reaction.

[43] Question: When information is not readily available, how often do you ask a member of staff for more information? Responses: Always, Most of the time, About half of the time, Occasionally, Never, I don't need to ask because the information is always readily available, Don't know. Base= 1172, all online respondents who eat out or buy food to take away and have a food reaction, and all postal respondents, who suffer from a bad or unpleasant physical reaction after consuming certain foods, or avoid certain foods because of the bad or unpleasant physical reaction they might cause, excluding those who say `I don't need to ask because the information is always readily available'.

respondents reported they were not comfortable doing this (i.e., not very comfortable or not at all comfortable)[44].

Figure 19. Confidence of respondents with a food hypersensitivity in information provided by food businesses.



Source: Food and You 2: Wave 4

[44] Question: How comfortable do you feel asking a member of staff for more information about food that might cause you a bad or unpleasant physical reaction? Responses: Very comfortable, Fairly comfortable, Not very comfortable, Not at all comfortable, It varies from place to place, Don't know. Base = 1244, all online respondents who eat out or buy food to take away and have a food reaction, and all postal respondents, who suffer from a bad or unpleasant physical reaction after consuming certain foods, or avoid certain foods because of the bad or unpleasant physical reaction they might cause.

Respondents who had a food hypersensitivity were asked how confident they were that the information provided at different types of food businesses would allow them to identify and avoid food that might cause a bad or unpleasant physical reaction. Respondents were more likely to report confidence (for example, very or fairly confident) in the information provided by restaurants (81%), cafés, coffee or sandwich shops (72%), and pubs or bars (67%) compared to the information provided by takeaways when ordering directly from a takeaway shop or restaurant (59%) or when ordering through an online ordering and delivery company (for example, JustEat, Deliveroo, UberEats) (50%). Respondents were least likely to report confidence in the information provided by food-sharing apps (for example, Olio or Too Good To Go) (22%) or Facebook Marketplace (18%) (Figure 19)[45].

[45] Question: How confident are you about the information provided when eating food...A) from a café / coffee shop / sandwich shop. B) In a pub / bar. C) From a takeaway, ordered directly from a takeaway shop or restaurant. D) From a takeaway, ordered through an online ordering and delivery company (for example, JustEat, Deliveroo, UberEats). E) In a restaurant. F) Ordered through Facebook Marketplace (for example, pre-prepared food or meals) G) Ordered through a food-sharing app (for example, Olio or Too Good To Go). Responses: Very confident, Fairly confident, Not very confident, Not at all confident, It varies from place to place, Don't know. Base A= 1088, B= 998, C= 1098, D= 856, E= 1110, F= 500, G= 531, all online respondents who eat food A/B/C/D/E/F/G, respondents who eat food in each situation, and suffer from a bad or unpleasant physical reaction after consuming certain foods, or avoid certain foods because of the bad or unpleasant physical reaction they might cause.

Most respondents were confident (for example, very confident or fairly confident) that the information provided in writing (83%) or verbally by a member of staff (69%) would allow them to identify and avoid food that might cause a bad or unpleasant physical reaction[46].

[46] Question: How confident are you that the information provided will allow you to identify and avoid food that might cause you a bad or unpleasant physical reaction?... A) when the information is provided in writing (for example, on the main menu or a separate allergen menu). B) when the information is provided verbally by a member of staff. Responses: Very confident, Fairly confident, Not very confident, Not at all confident, It varies from place to place, Don't know. Base= 1244, all online respondents who eat out or buy food to take away, and all respondents who answered the paper questionnaire, who suffer from a bad or unpleasant physical reaction after consuming certain foods or avoids certain foods because of the bad or unpleasant physical reaction they might cause.

Chapter 6: Eating at home

Introduction

The FSA is responsible for protecting the public from foodborne diseases. This involves working with farmers, food producers and processors, and the retail and hospitality sectors to ensure that the food people buy is safe.

Since people are responsible for the safe preparation and storage of food in their home, Food and You 2 asks respondents about their food-related behaviours in the home, including whether specific foods are eaten, and knowledge and reported behaviour in relation to five important aspects of food safety: cleaning, cooking, chilling, avoiding cross-contamination and use-by dates. The FSA gives practical guidance and recommendations to consumers on food safety and hygiene in the home. Food and You 2 also asks respondents about the frequency with which they prepare or consume certain types of food.

Two versions of the 'Eating at home' module have been created, a brief version which includes a limited number of key questions, and a fuller version which includes all related questions. The brief 'Eating at home' module was included in the Wave 4 survey and is reported in this chapter[47].

This chapter provides an overview of respondent knowledge, attitudes and behaviours relating to food safety, diet, and other food-related behaviours.

Cleaning

Handwashing in the home

The FSA recommends that everyone should wash their hands before they prepare, cook or eat food and after touching raw food, before handling ready-to-eat food.

[47] The full 'Eating at home' module was reported in the Food and You 2: Wave 1 Key Findings report. The full module will be reported again in Wave 5.

The majority (73%) of respondents reported that they always wash their hands before preparing or cooking food. However, 26% of respondents reported that they do not always (i.e., most of the time or less often) wash their hands before preparing or cooking food[48].

Most respondents (91%) reported that they always wash their hands immediately after handling raw meat, poultry, or fish. However, 8% of respondents reported that they do not always (i.e., most of the time or less often) wash their hands immediately after handling raw meat, poultry or fish[49].

Handwashing when eating out

Respondents were asked, how often, if at all, they washed their hands or used hand sanitising gel or wipes before eating when they ate outside of their home. Around half (46%) of respondents reported that they always washed their hands, used hand sanitising gel or wipes when they ate outside of their home, 49% did this less often (i.e., most of the time or less often) and 4% never did this[50].

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[48] Question: When you are at home, how often, if at all, do you wash your hands before starting to prepare or cook food. Responses: Always, Most of the time, About half the time, Occasionally, Never, I don't cook, Don't know. Base= 4430, all online and all those who completed the `Eating at Home' postal questionnaire who ever do some food preparation or cooking for their household, excluding `I don't cook/prepare food'.

[49] Question: When you are at home, how often, if at all, do you wash your hands before starting to prepare or cook food. Responses: Always, Most of the time, About half the time, Occasionally, Never, Don't know. Base= 4239, all online respondents and those who completed the `Eating at home' postal questionnaire who ever do some food preparation or cooking for their household, excluding 'I don't cook meat'.

[50] Question: When eating outside of the home, how often, if at all, do you wash your hands, or use hand sanitising gel or wipes before eating? Responses: Always, Most of the time, About half the time, Occasionally, Never, Don't know. Base= 4755, all online respondents and those answering the Eating Out postal questionnaire.

Chilling

The FSA provides guidance on how to chill food properly to help stop harmful bacteria growing.

If and how respondents check fridge temperature

When asked what temperature the inside of a fridge should be, 62% of respondents reported that it should be between 0-5 degrees Celsius, as recommended by the FSA. Almost 1 in 5 (19%) respondents reported that the temperature should be above 5 degrees, 3% reported that the temperature should be below 0 degrees, and 16% of respondents did not know what temperature the inside of their fridge should be[51].

Almost half of respondents who have a fridge reported that they monitored the temperature, either manually (47%) or via an internal temperature alarm (10%)[52]. Of the respondents who monitor the temperature of their fridge, 84% reported that they check the temperature of their fridge at least once a month, as recommended by the FSA[53].

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[51] Question: What do you think the temperature inside your fridge should be? Responses: Less than 0 degrees C (less than 32 degrees F), Between 0 and 5 degrees C (32 to 41 degrees F), More than 5 but less than 8 degrees C (42 to 46 degrees F), 8 to 10 degrees C (47 to 50 degrees F) (2%), More than 10 degrees C (over 50 degrees F), Other, Don't know. Base=4778, all online respondents and those answering the `Eating at Home' paper questionnaire, excluding those who don't have a fridge.

[52] Question: Do you, or anyone else in your household, ever check your fridge temperature? Responses: Yes, No, I don't need to - it has an alarm if it is too hot or cold, Don't know. Base= 4778, all online respondents and those answering the `Eating at Home' paper questionnaire, excluding those who don't have a fridge.

[53] Question: How often, if at all, do you or someone else in your household check the temperature of the fridge? Responses: At least daily, 2-3 times a week, Once a week, Less than once a week but more than once a month, Once a month, four times a year, 1-2 times a year, Never, Don't know. Base= 2302, all online respondents and those who completed the `Eating at Home' postal questionnaire where someone in household checks fridge temperature.

Cooking

The FSA recommends that cooking food at the right temperature and for the correct length of time will ensure that any harmful bacteria are killed. When cooking pork, poultry, and minced meat products the FSA recommends that the meat is steaming hot and cooked all the way through, that none of the meat is pink and that any juices run clear.

The majority (79%) of respondents reported that they always cook food until it is steaming hot and cooked all the way through, however 21% reported that they do not always do this[54].

When respondents were asked to indicate how often they eat chicken or turkey when the meat is pink or has pink juices[55], the majority (91%) reported that they never eat chicken or turkey when it is pink or has pink juices. However, 7% of respondents reported eating chicken or turkey at least occasionally when it is pink[56].

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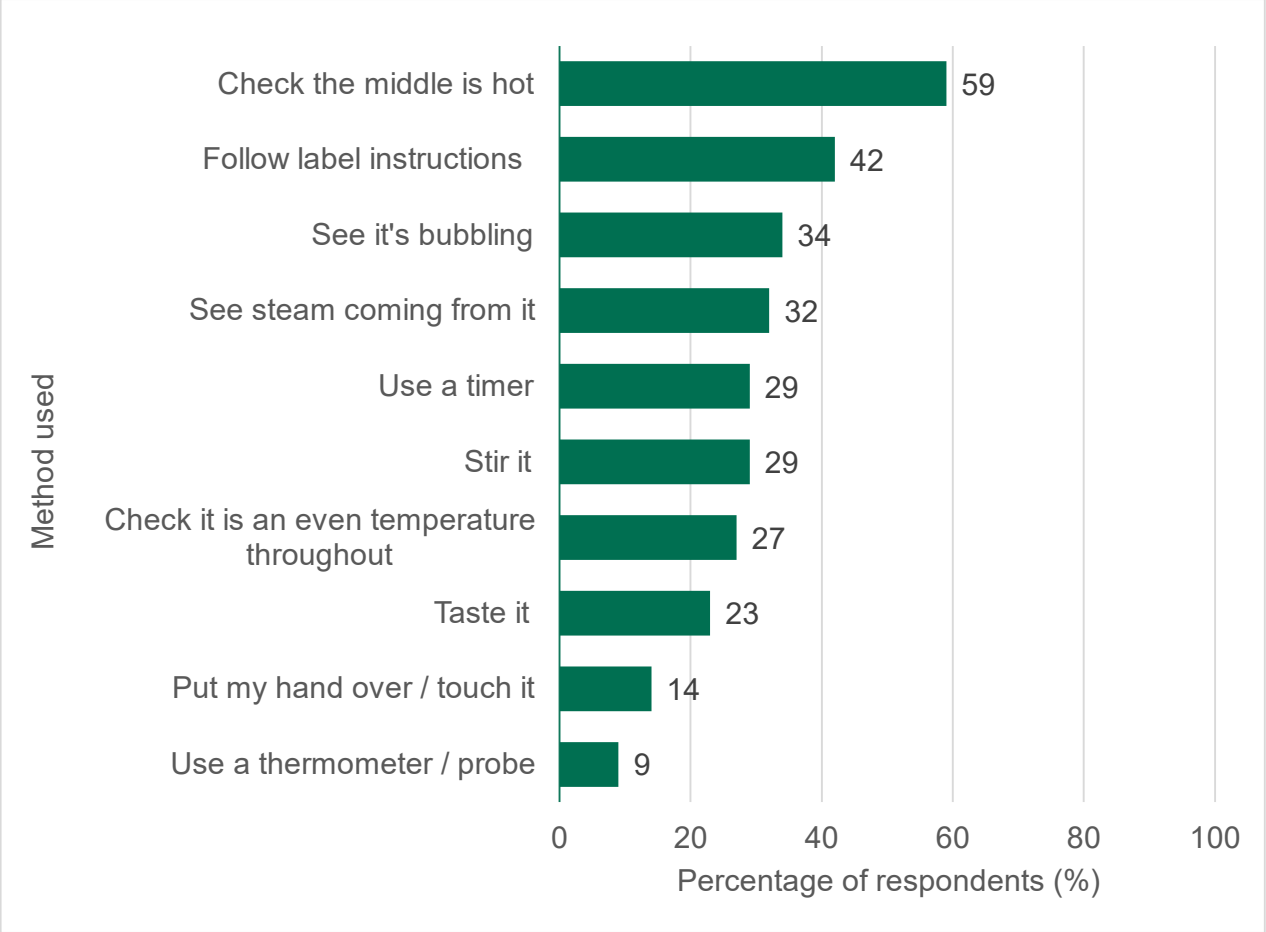
[54] Question: How often, if at all, do you cook food until it is steaming hot and cooked all the way through? Responses: Always, Most of the time, About half of the time, Occasionally, Never, Don't know. Base= 4420, all online respondents who ever do some food preparation or cooking for their household, and all those who completed the `Eating at Home' postal paper questionnaire, excluding 'I don't cook'.

[55] Data on the consumption of red meat, duck, beefburgers, sausages and pork when the meat is pink or has pink or red juices is available from Food and You 2: Wave 1 and is expected to be reported in Food and You 2: Wave 5.

[56] Question: How often, if at all, do you eat chicken or turkey when the meat is pink or has pink or red juices? Responses: Always, Most of the time, About half of the time, Occasionally, Never, Don't know. Base =4381, all respondents who are not vegan, pescatarian or vegetarian, and who do eat chicken/turkey

Reheating

Figure 20. How respondents check whether reheated food is ready to eat.



Source: Food & You 2: Wave 4

Respondents were asked to indicate how they check food is ready to eat when they reheat it. The most common method was to check the middle is hot (59%), and the least common method was to use a thermometer or probe (9%) (Figure 20)[57].

When respondents were asked how many times they would reheat food, the majority reported that they would only reheat food once (81%), 10% would reheat food twice, and 3% would reheat food more than twice[58].

Leftovers

Respondents were asked how long they would keep leftovers in the fridge for. Almost two-thirds (65%) of respondents reported that they would eat leftovers within 2 days, around a quarter (26%) of respondents reported that they would eat leftovers within 3-5 days and only 2% would eat leftovers after 5 days or longer[59].

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[57] Question: When reheating food, how do you know when it is ready to eat? (Select all that apply). Responses: I check the middle is hot, I follow the instructions on the label, I can see its bubbling, I use a timer to ensure it has been cooked for a certain amount of time, I check it's an even temperature throughout, I can see steam coming from it, I can see steam coming from it, I taste it, I stir it, I put my hand over it/touch it, I use a thermometer/probe, None of the above, I don't check. Base= 4208, all online respondents and those who completed the `Eating at Home' postal questionnaire who ever do some food preparation or cooking for their household, excluding 'I don't reheat food'.

[58] Question: How many times would you consider reheating food after it was cooked for the first time? Responses: Not at all, Once, Twice, More than twice, Don't know. Base= 4213, all online respondents and those who completed the `Eating at Home' postal questionnaire who reheat food using one of the methods in the previous question.

[59] Question: When is the latest you would consume any leftovers stored in the fridge? Responses: The same day, Within 1-2 days, Within 3-5 days, More than 5 days later, It varies too much, Don't know. Base= 4769, all online respondents and those answering the 'Eating at Home' postal questionnaire.

Avoiding cross-contamination

The FSA provides guidelines on how to avoid cross-contamination. The FSA recommends that people do not wash raw meat. Washing raw meat can spread harmful bacteria onto your hands, clothes, utensils, and worktops.

Over half of respondents (56%) reported that they never wash raw chicken, whilst 40% of respondents reported that they wash raw chicken at least occasionally (i.e. occasionally or more often)[60].

How and where respondents store raw meat and poultry in the fridge

The FSA recommends that refrigerated raw meat and poultry is kept covered, separately from ready-to-eat foods and stored at the bottom of the fridge to avoid cross-contamination.

Respondents were asked to indicate, from a range of responses, how they store meat and poultry in the fridge. Respondents were most likely to report storing raw meat and poultry in its original packaging (67%) or away from cooked foods (49%). A third of respondents reported storing raw meat and poultry covered with film/foil (33%) or in a sealed container (34%), with fewer keeping the product on a plate (13%)[61].

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[60] Question: How often, if at all, do you do the following? Wash raw chicken. Responses: Always, Most of the time, About half of the time, Occasionally, Never, Don't know. Base= 4375, all online respondents who ever do some food preparation or cooking for their household, and all those who completed the `Eating at Home' postal paper questionnaire, excluding 'I don't cook'.

[61] Question: How do you store raw meat and poultry in the fridge? Please select all the apply. Responses: Away from cooked foods, Covered with film/foil, In a sealed container, In its original packaging, On a plate. Base= 4306, all online respondents, and those answering the `Eating at Home' postal questionnaire except those who don't buy/store meat/poultry, don't store raw meat/poultry in the fridge, do not have a fridge or don't know.

Two-thirds (66%) of respondents reported storing raw meat and poultry at the bottom of the fridge, as recommended by the FSA. However, 2 in 10 (20%) respondents reported storing raw meat and poultry wherever there is space in the fridge, 11% of respondents reported storing raw meat and poultry in the middle of the fridge, and 5% at the top of the fridge[62].

Use-by and best before dates

Respondents were asked about their understanding of the different types of date labels and instructions on food packaging, as storing food for too long or at the wrong temperature can cause food poisoning. Use-by dates relate to food safety. Best before (BBE) dates relate to food quality.

Respondents were asked to indicate which date shows that food is no longer safe to eat. Over two-thirds (69%) of respondents identified the use-by date as the information which shows that food is no longer safe to eat. However, 9% of respondents identified the best before date as the date which shows food is no longer safe to eat[63].

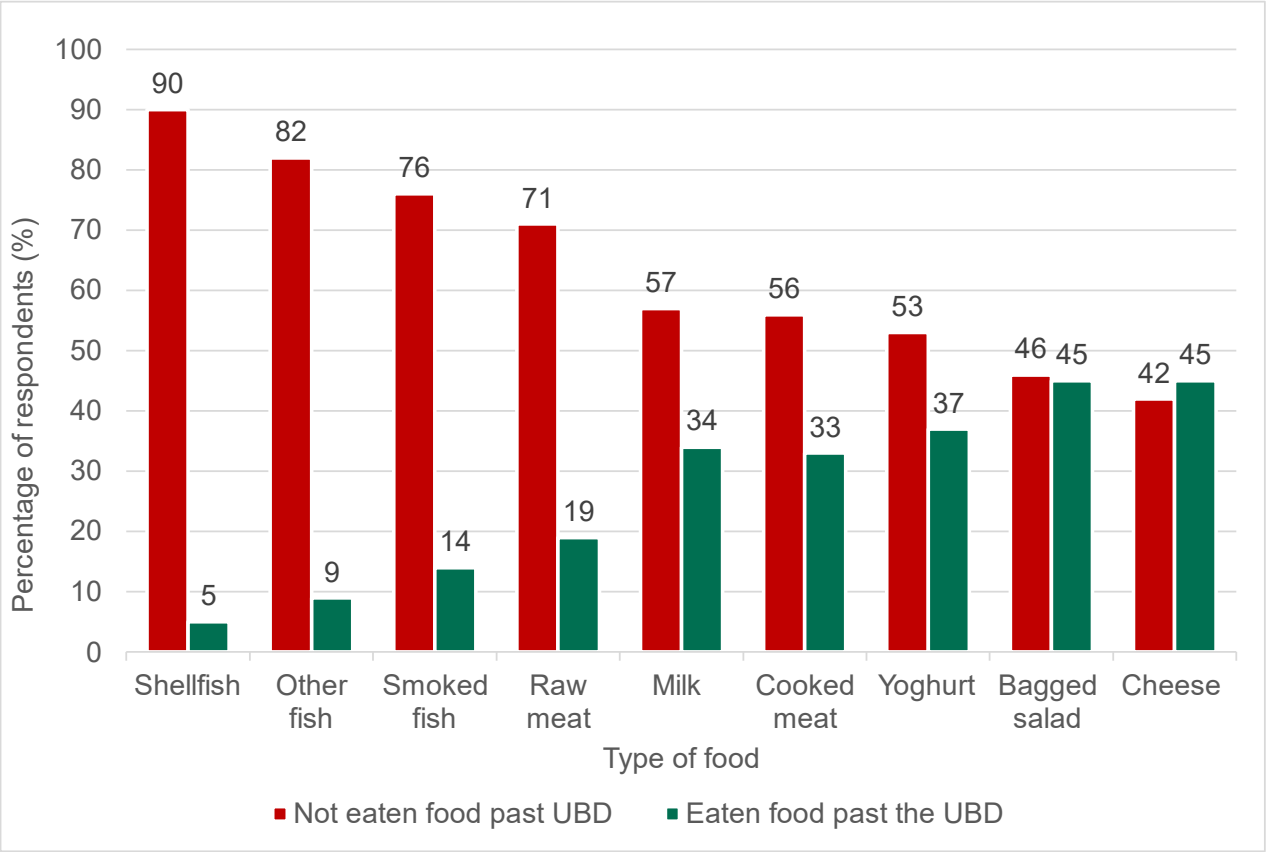
Around two-thirds (67%) of respondents reported that they always check use-by dates before they cook or prepare food and around a quarter (23%) of respondents did this

[62] Question: Where in the fridge do you store raw meat and poultry? Responses: Wherever there is space, At the top of the fridge, In the middle of the fridge, At the bottom of the fridge. Base= 4227, all online respondents and those who completed the `Eating at Home' paper questionnaire, who store raw meat/poultry in the fridge except those who don't buy/store meat/poultry, don't have a fridge or don’t know.

[63] Question: Which of these shows when food is no longer safe to eat? Responses: Use-by date, Best before date Sell by date, Display until date, All of these, It depends, None of these, Don’t know. Base=4786, all online respondents and those answering the ‘Eating at Home’ postal questionnaire.

most of the time. Almost 1 in 10 (8%) reported checking use-by less often (i.e., about half the time or occasionally), and just 1% reported never checking use-by dates[64].

Figure 21. Types of food respondents had eaten after the use-by date in the previous month.



Source: Food & You 2: Wave 4

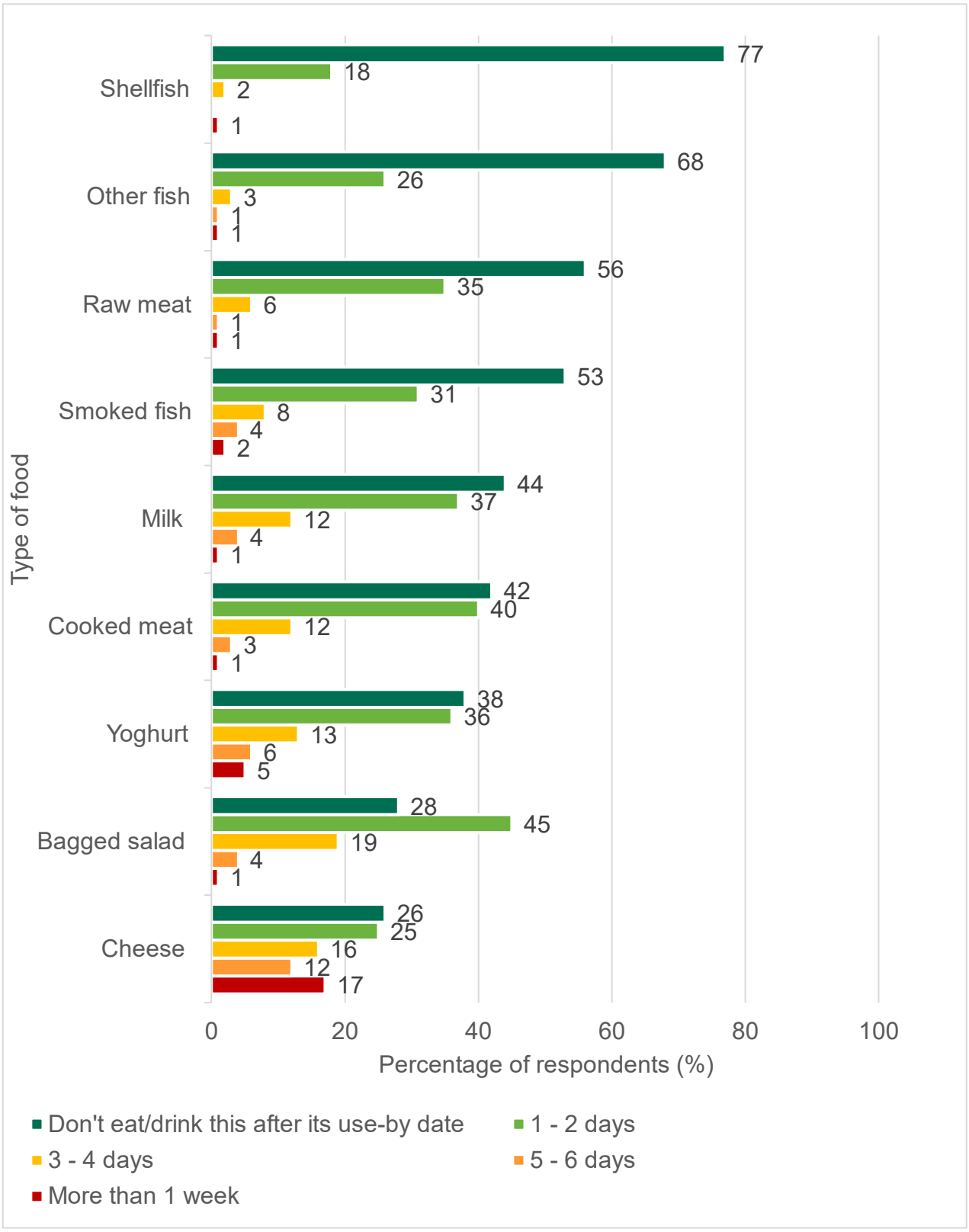
Respondents who had eaten certain foods in the last month were asked to indicate if they had eaten that food past the use-by date. Of these respondents, most reported that they had not eaten shellfish (90%), other fish (82%), smoked fish (76%) or raw meat (such as beef, lamb, pork or poultry) (71%) past the use-by date in the previous month. Whereas over half of respondents had not consumed milk (57%), cooked meat (56%) or yoghurt

[64] Question: How often, if at all, do you check use-by dates when you are about to cook or prepare food? Responses: Always, Most of the time, About half of the time, Occasionally, Never, It varies too much, Don't know. Base=4421, all online respondents who ever do some food preparation or cooking for their household, and all those who completed the Eating at Home postal questionnaire, excluding I don't cook / prepare food and not stated.

(53%) past the use-by date in the previous month. Less than half of respondents had eaten bagged salad (46%) or cheese (42%) past the use-by date in the previous month (Figure 21)[65].

[65] Question: In the last month, have you eaten this food past its use by date? A= Cooked meats, B=Smoked fish, C=Bagged salads, D=Cheese, E=Milk, F= Raw meat, G=Shellfish, H=Any other fish, I=Yoghurt. Responses: Yes, this happened every week, Yes, this happened some weeks but not every week, Yes, this happened just one week in the last month, No, never, Don't know/can't remember, Prefer not to say. Base A= 3192, B=2458, C=3172, D=3384, E=3416, F= 3228, G=2421, H=2869, I=3176, all online respondents who had eaten the type of food in the previous month. Please note: base description varies by food type, further information is available in the data tables.

Figure 22. How long after the use-by date respondents would consume different foods.



Source: Food & You 2: Wave 4

Respondents who eat certain foods were asked when, if at all, is the latest that they would eat the type of food after the use-by date. Of these respondents, most reported that they would not eat shellfish (77%), other fish (68%) past the use-by date. Over half of respondents would not eat raw meat (56%) or smoked fish (53%) past the use-by date. When foods are eaten past the use-by date, they are typically eaten 1-2 days after the use-by date (for example, 45% of respondents would eat bagged salads 1-2 days after the use-by date). Of the specified foods, respondents reported that they would be most likely to eat bagged salad and cheese after the use-by date: around 7 in 10 respondents would eat bagged salad (70%) and cheese (71%) after the use-by date. Almost 2 in 10 (17%) respondents would eat cheese more than 1 week after the use-by date (Figure 22)[66].

Chapter 7: Food shopping: sustainability and environmental impact

Introduction

In March 2022, the FSA launched a new 5 year strategy (2022-2027). Building on the previous strategy, the FSA's vision has evolved to include 'food is healthier and more

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[66] Question: When, if at all, is the latest you would eat or drink the following items after their use-by date? A= Cooked meats, B=Smoked fish, C=Bagged salads, D=Cheese, E=Milk, F= Raw meat such as beef/pork/lamb/raw poultry, G=Shellfish, H=Any other fish, I=Yoghurt. Responses: 1-2 days after the use-by date, 3-4 days after the use-by date, 5-6 days after the use-by date, 1-2 weeks after the use-by date, more than 2 weeks after the use-by date, I don't eat/drink this after its use-by date, Don't know/I don't ever check the use-by date of this. Base A= 4324, B=3485, C=4398, D=4563, E=4481, F= 4288, G=3151, H=3963, I=4379, all online respondents and those who completed the Eating at Home postal questionnaire, who eat the type of food. Please note: base description varies by food type, further information is available in the data tables. The percentage of respondents who reported eating different foods past the use-by date may vary between data shown in Figure 21 and Figure 22 due to difference in the time frame which the questions refer to.

sustainable', to account for the growing priorities of dietary health and sustainability for the UK Government, Welsh Government, Northern Ireland Executive, and for consumers.

The Department for Environment, Food and Rural Affairs (Defra) has a broad remit but plays a major role in increasing the sustainability, productivity and resilience of the agriculture, fishing, food and drink sectors; enhancing biosecurity at the border; and raising animal welfare standards.

This chapter provides an overview of respondents' knowledge, attitudes and behaviours relating to the sustainability and environmental impact of food including shopping choices and diets. Defra co-funded questions in this chapter which relate to the environmental impact and sustainability of food.

The importance of buying foods with a low environmental impact

Respondents were asked how important it was to buy food which has a low environmental impact. Over three-quarters (78%) of respondents reported that it was important (i.e., very important or somewhat important) to them to buy food which has a low environmental impact. Almost 2 in 10 (18%) respondents did not consider it important (i.e., not very important or not at all important[67].

The perceived importance placed on buying food which has a low environmental impact varied between different categories of people in the following ways:

- NS-SEC: respondents in some occupational groups (for example, 82% of those in intermediate occupations) and full-time students (78%) were more likely to consider buying food which has a low environmental impact as important compared to those in other occupational groups (for example, 69% of those in

[67] Question: How important is it to you to buy food which has a low environmental impact? Responses: Very important, Somewhat important, Not very important, Not at all important, Don't know. Base= 4786, all online respondents, and those answering the `Eating at Home' postal questionnaire.

lower supervisory and technical occupations) and those who were long term unemployed and/or never worked (68%).

- Responsibility for cooking: respondents who were responsible for cooking (79%) were more likely to consider buying food which has a low environmental impact as important compared to those who do not cook (58%).

- Responsibility for shopping: respondents who were responsible for shopping (79%) were more likely to consider buying food which has a low environmental impact as important compared to those who never do food shopping (59%).

How often respondents check for information about the environmental impact of food

Respondents were asked how frequently they check for information about the environmental impact of food when purchasing food. Around 2 in 10 (21%) respondents reported that they often checked (i.e., always or most of the time) for information about the environmental impact when purchasing food, 45% did this less often (i.e., about half of the time, or occasionally) and 29% of respondents reported that they never checked for information about the environmental impact when purchasing food[68].

How often respondents checked for information about the environmental impact of food, varied between different categories of people in the following ways:

- Annual household income: respondents with an income of £19,000 or below (28%) were more likely to often check for information about the environmental impact of food compared to those who had a higher income, for example, 17% of those with an income of £64,000-£95,999.

[68] Question: When purchasing food, how often do you check for information on environmental impact? Responses: Always, Most of the time, About half the time, Occasionally, Never, Don't know. Base= 4786, all online respondents, and those answering the `Eating at Home' postal questionnaire.

- Food security: respondents with very low food security (34%) were more likely to often check for information about the environmental impact of food compared to those who had high (18%) or marginal (22%) food security.
- Ethnic group: Asian or British Asian (33%) respondents were more likely to often check for information about the environmental impact of food compared to white (20%) respondents.
- Food hypersensitivity: respondents with a food allergy (31%) were more likely to often check for information about the environmental impact of food compared to those who did not have a food hypersensitivity (20%).
- Responsibility for cooking: respondents who were responsible for cooking (22%) were more likely to often check for information about the environmental impact of food compared to those who do not cook (10%).

How often respondents buy foods with a low environmental impact

Respondents were asked to indicate how often, where possible, they buy food which has a low environmental impact. Almost a third (30%) of respondents often (i.e., always or most of the time) buy food which has a low environmental impact and 43% do this less often (i.e., about half of the time, or occasionally). Less than 1 in 10 (7%) respondents reported that they never buy food which has a low environmental impact, however almost 2 in 10 (19%) respondents do not know how often they buy food which has a low environmental impact[69].

How often respondents bought food which had a low environmental impact, where possible, varied between different categories of people in the following ways:

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[69] Question: How often do you buy food which has a low environmental impact, where possible? Responses: Always, Most of the time, About half the time, Occasionally, Never, Don't know. Base= 4786, all online respondents, and those answering the `Eating at Home' postal questionnaire.

- Age group: older adults were more likely to have bought food which has a low environmental impact compared to younger adults. For example, 39% of those aged 75 years or older bought food which has a low environmental impact compared to 26% of those aged 16-24 years.

- Annual household income: the likelihood that respondents bought food which has a low environmental impact did not vary by income. For example, 31% of those with an income of £19,000 or below bought food which has a low environmental impact compared to 33% of those with an income of £96,000 and over**.

- Food security: the likelihood that respondents bought food which has a low environmental impact did not vary by level of food security. For example, 29% of those with high food security bought food which has a low environmental impact compared to 35% of those with very low food security**.

- Food hypersensitivity: respondents with a food intolerance (44%) were more likely to have bought food which has a low environmental impact compared to those who do not have a food hypersensitivity (28%).

- Responsibility for cooking: respondents who were responsible for cooking (31%) were more likely to have bought food which has a low environmental impact compared to those who do not cook (17%).

Attitudes toward information about a products environmental impact

Respondents were asked to indicate to what extent they agreed or disagreed that food products show enough information about their environmental impact. Almost a quarter (24%) of respondents agreed (for example, strongly agree or agree) that products show enough information about their environmental impact, however around a third (34%) of respondents disagreed (for example, strongly disagree or disagree). Almost 1 in 10

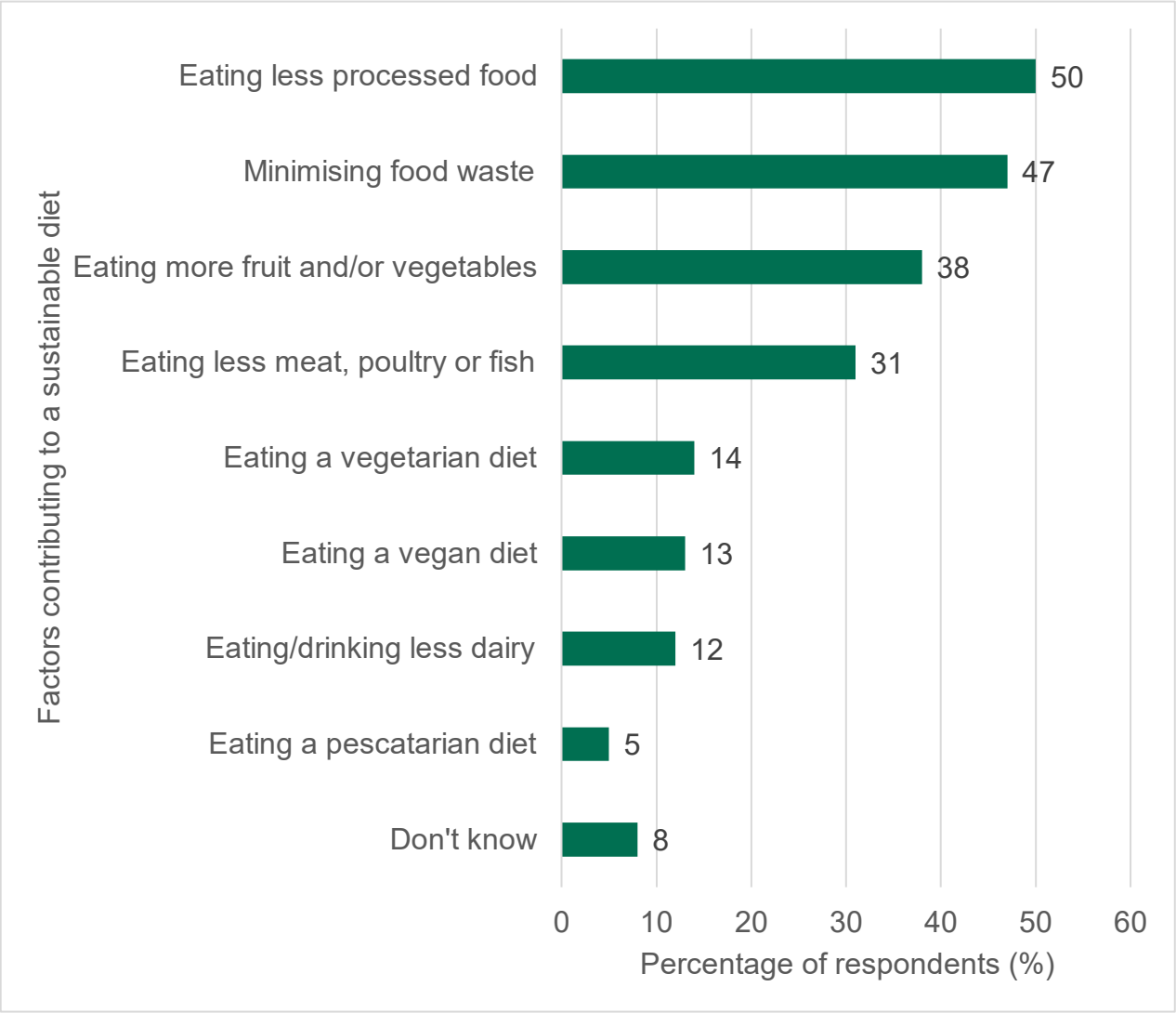
(11%) respondents reported that they do not know whether products show enough information about their environmental impact[70].

[70] Question: To what extent do you agree or disagree that food products show enough information about their environmental impact? Responses: Strongly agree, Agree, Neither agree nor disagree, Disagree, Strongly disagree, Don't know. Base= 4786, all online respondents, and those answering the `Eating at Home' postal questionnaire.

Perceptions of factors which contribute to sustainable diets and shopping choices

Perceptions of what contributes to a sustainable diet

Figure 23. Factors which respondents thought contribute most to a sustainable diet.



Source: Food and You 2: Wave 4

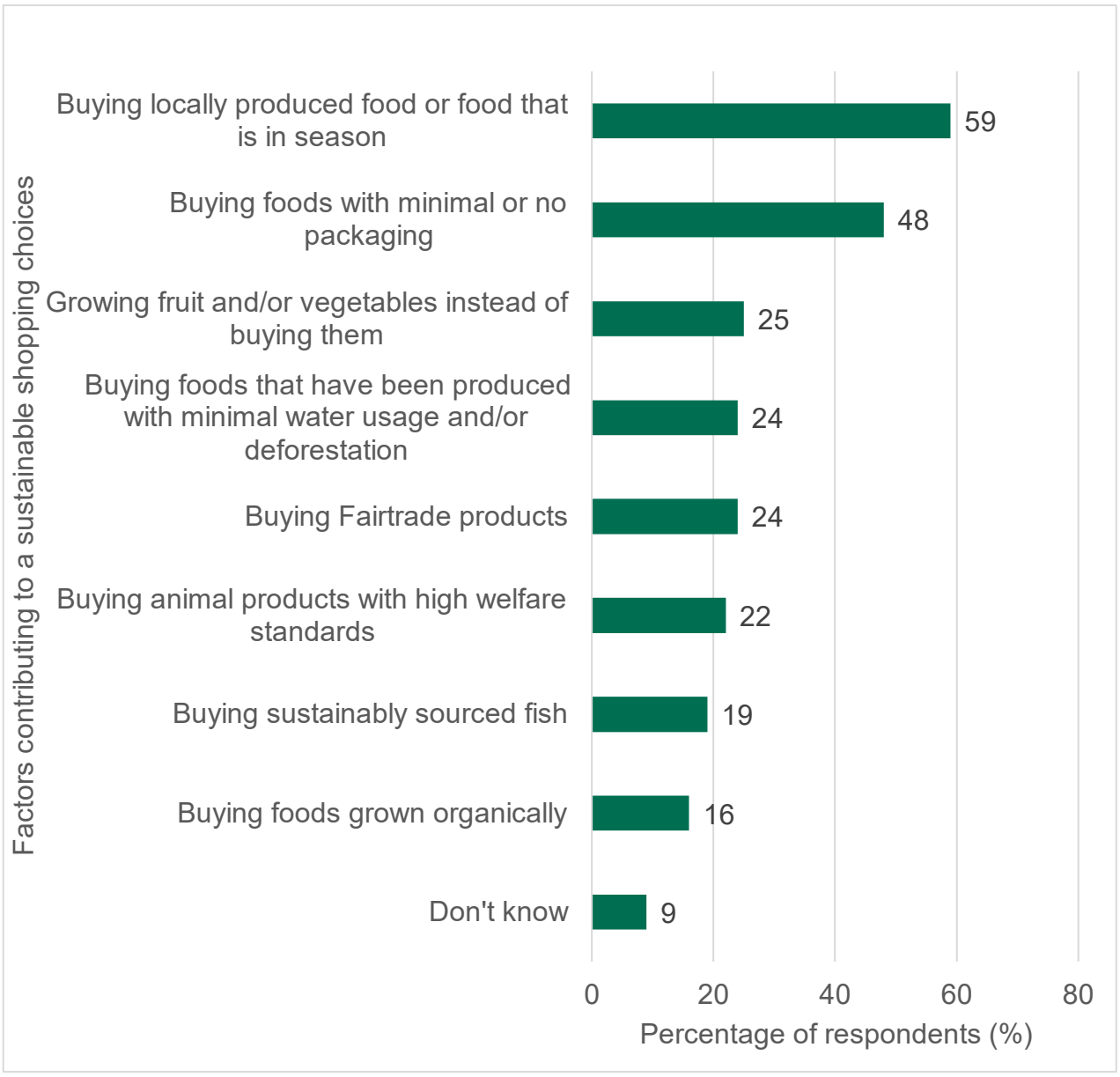
Respondents were asked, from a list of options, what they thought contributes most to someone having a sustainable diet. Half of respondents thought that eating less processed food (50%) and 47% thought that minimising food waste contributed most to someone having a sustainable diet. Around a third of respondents thought that eating more fruit and/or vegetables (38%), and eating less meat, poultry, or fish (31%)

contributed most to a sustainable diet. Fewer respondents thought that eating a vegetarian (14%) or vegan (13%) diet or consuming less dairy (12%) contributed most to a sustainable diet. Almost 1 in 10 (8%) respondents reported that they did not know what contributed most to someone having a sustainable diet (Figure 23)[71].

[71] Question: Which of the following do you think contributes most to someone having a sustainable diet? Responses: Eating a vegetarian diet, Eating a pescatarian diet, Eating a vegan diet, Eating less meat or poultry or fish, Eating/drinking less dairy, Eating less processed food, Eating more fruit and/or vegetables, Minimising food waste, None of these, Don’t know. Base= 4786, all online respondents, and those answering the `Eating at Home' postal questionnaire.

Perceptions of what contributes to a sustainable shopping choices

Figure 24. What respondents thought contributes most to sustainable shopping choices.



Source: Food and You 2: Wave 4

Respondents were asked, from a list of options, what they thought contributed most to someone making sustainable food shopping choices. Almost 6 in 10 (59%) respondents thought that buying locally produced food or food that is in season contributed most. Around half of respondents thought that buying foods with minimal or no packaging (48%) contributed most to someone making sustainable food shopping choices. Around a

quarter of respondents reported that growing fruit and/or vegetables instead of buying them (25%), buying foods that have been produced with minimal water usage and/or minimal deforestation (24%), buying Fairtrade products (24%) and buying animal products with high welfare standards (22%), contributed most. Almost 1 in 10 (9%) respondents reported that they did not know what contributed most to someone making sustainable food shopping choices (Figure 24)[72].

Chapter 8: Sustainable diets, meat alternatives and genetic technologies

Introduction

The FSA's vision as set out in the 2022-2027 strategy is a food system in which 'food is healthier and more sustainable', accounting for the growing priorities of dietary health and sustainability for the UK Government, Welsh Government, Northern Ireland Executive, and for consumers.

The Department for Environment, Food and Rural Affairs (Defra) has a broad remit and plays a major role in increasing the sustainability, productivity and resilience of the agriculture, fishing, food and drink sectors, enhancing biosecurity at the border and raising animal welfare standards. In addition, Defra oversees the regulation of genetic technologies such as genetically modified organisms (GMO) and gene edited (GE) organisms.

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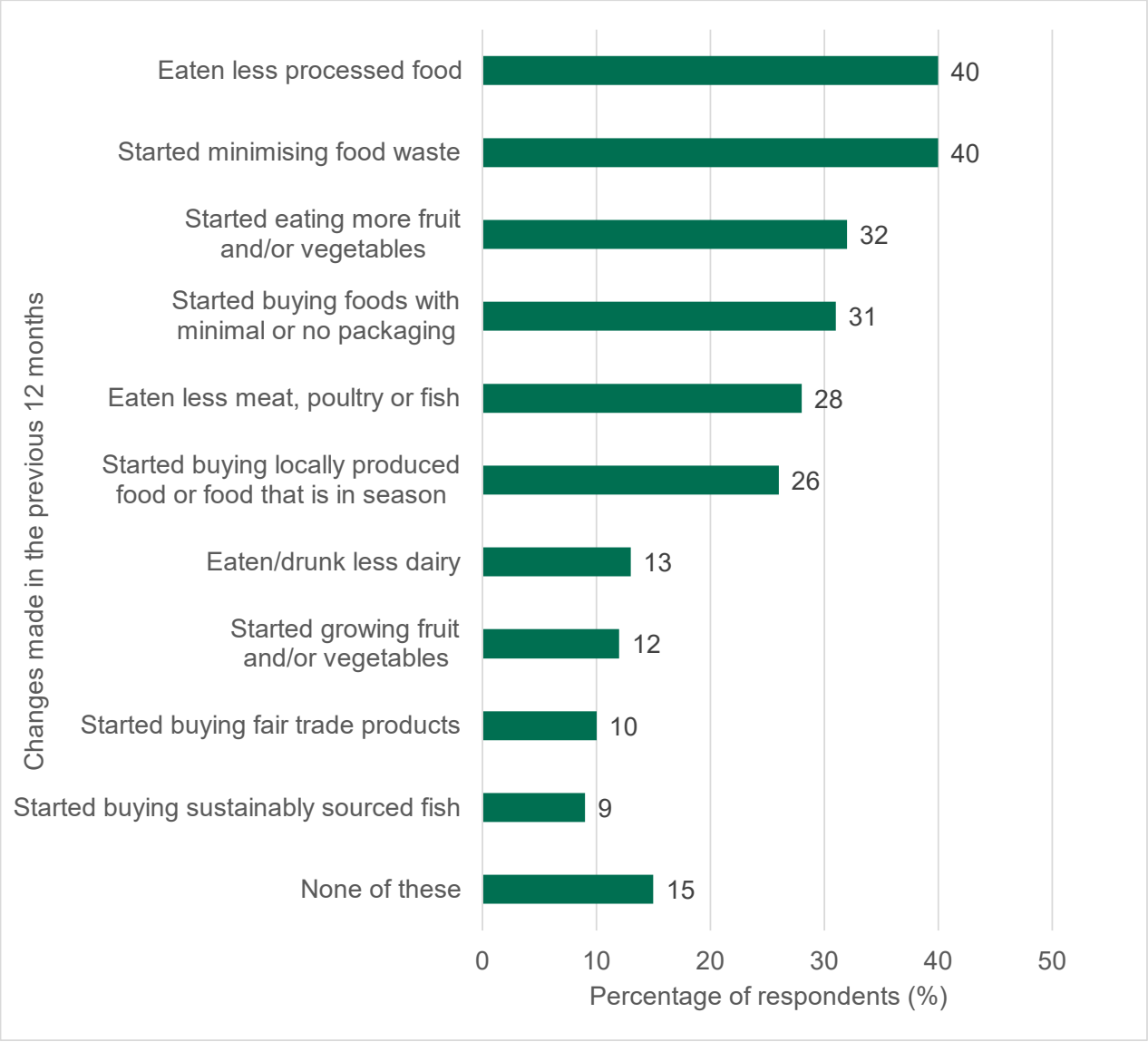
[72] Question: Which of the following do you think contributes most to someone making sustainable food shopping choices? Responses: Buying animal products with high welfare standards, Buying fair trade products, Buying locally produced food or food that is in season, Buying foods with minimal or no packaging, Buying foods that have been produced with minimal water usage and/or minimal deforestation, Buying foods grown organically, Buying sustainably sourced fish, Growing fruit and/or vegetables instead of buying them, None of these, Don't know. Base= 4786, all online respondents, and those answering the `Eating at Home' postal questionnaire.

This chapter provides an overview of respondent knowledge, attitudes and behaviours relating to sustainable foods, meat alternatives and genetic technologies. Defra co-funded questions in this chapter which relate to the environmental impact and sustainability of food.

Changes to eating habits and food-related behaviours

Figure 25. Changes which respondents had made in the previous 12 months.



Source: Food and You 2: Wave 4

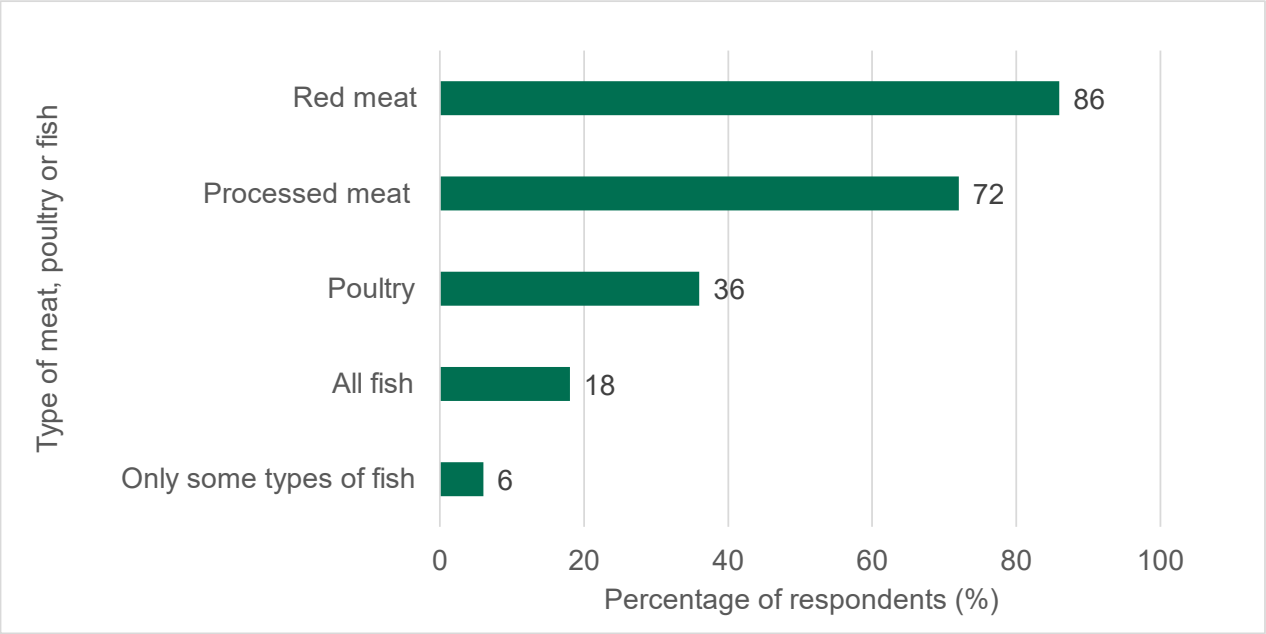
Respondents were asked, from a list of options, which, if any changes they had made in the previous 12 months. The most common changes reported by respondents were that they had eaten less processed food (40%) and started minimising food waste (40%).

Almost a third of respondents reported that they had started eating more fruit and vegetables (32%), started buying food with minimal or no packaging (31%) and/or had eaten less meat, poultry, or fish (28%) in the previous 12 months. Around a quarter (26%) of respondents reported that they had started buying locally produced food or food that is in season. However, 15% of respondents reported that they had not made any of the listed changes in the previous 12 months (Figure 25)[73].

[73] Question Which, if any, of the following changes have you made in the last 12 months? Responses: Stopped eating meat or poultry or fish completely, Eaten less meat or poultry or fish, Eaten/drunk less dairy, Eaten less processed food, Started eating more fruit and/or vegetables, Started minimising food waste, Started growing fruit and/or vegetables, Started buying animal products with high welfare standards, Started buying fair trade products, Started buying locally produced food or food that is in season, Started buying foods with minimal or no packaging, Started buying foods that have been produced with minimal water usage and / or minimal deforestation, Started buying foods grown organically, Started buying sustainably sourced fish, Other, None of these, Don’t know. Base= 4786, all online respondents, and those answering the `Eating at Home' postal questionnaire.

Meat, poultry, and fish: changes in consumption habits

Figure 26. Types of meat, poultry or fish which respondents had eaten less of in the previous 12 months.



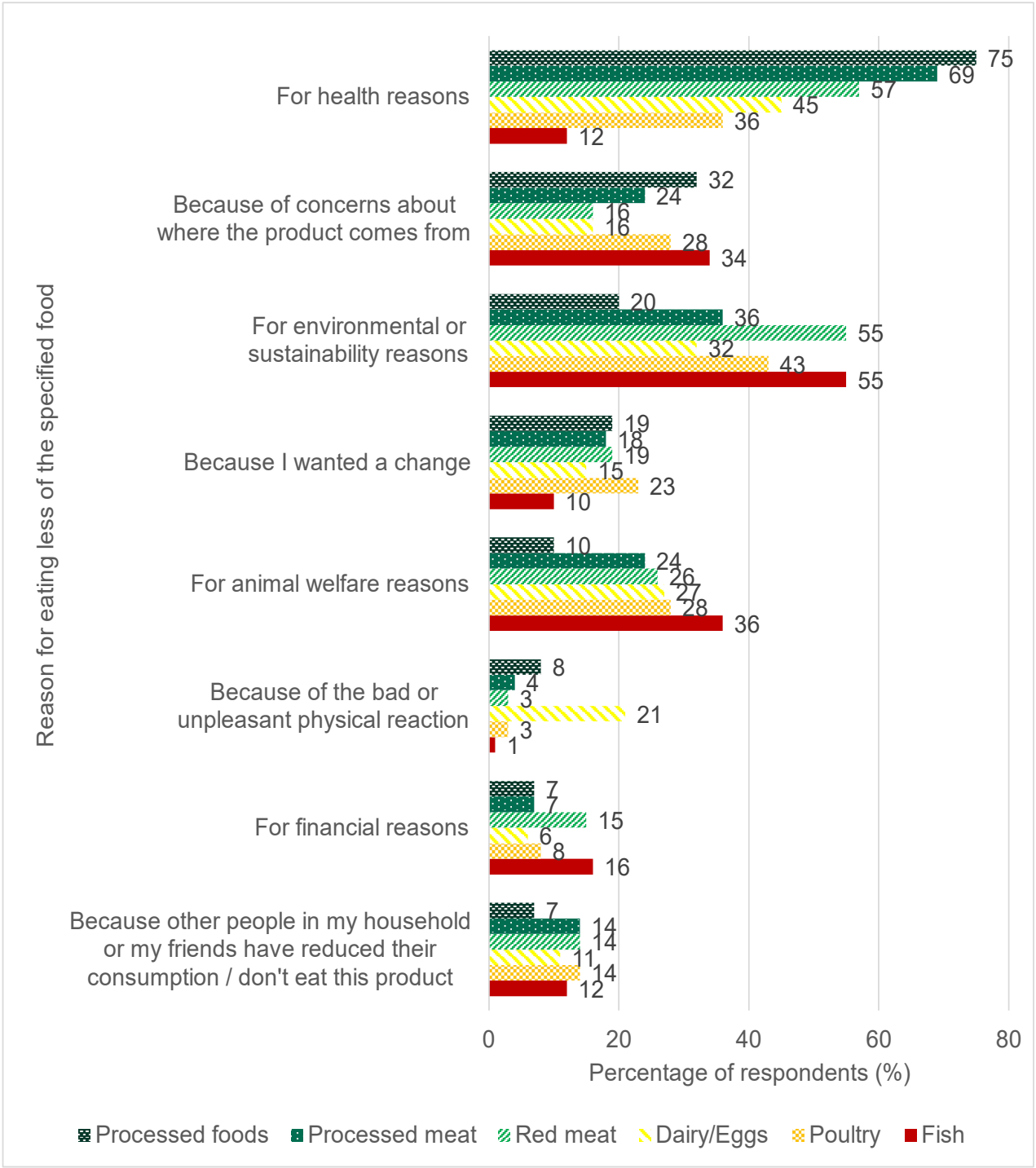
Source: Food and You 2: Wave 4

Respondents who reported that they had eaten less meat, poultry, or fish in the previous 12 months were asked which types of products the changes related to. Of these respondents, most (86%) had eaten less red meat (for example, beef, pork, or lamb) and 72% had eaten less processed meat (for example, chicken nuggets, ham, bacon) in the previous 12 months. Over a third (36%) reported that they had eaten less poultry and 18% reported that they had eaten less of all types of fish, with 6% eating less of only some types of fish in the previous 12 months (Figure 26) [74].

[74] Question What types of meat, poultry and/or fish have you eaten less of in the last 12 months? Responses: Red meat, for example, beef, pork or lamb; Processed meat, for example, chicken nuggets, ham, bacon, sausages, salami; Poultry, for example, chicken, turkey, duck; All fish; Only some types of fish; I haven't eaten less meat, poultry and/or fish in the last 12 months. Base= 1308, all online respondents and those who completed the `Eating at Home' postal questionnaire who have eaten less meat, poultry and/or fish in the last 12 months.

Reasons of changes in consumption habits

Figure 27. Common reasons that respondents had eaten less of specified foods in the previous 12 months.



Source: Food and You 2: Wave 4

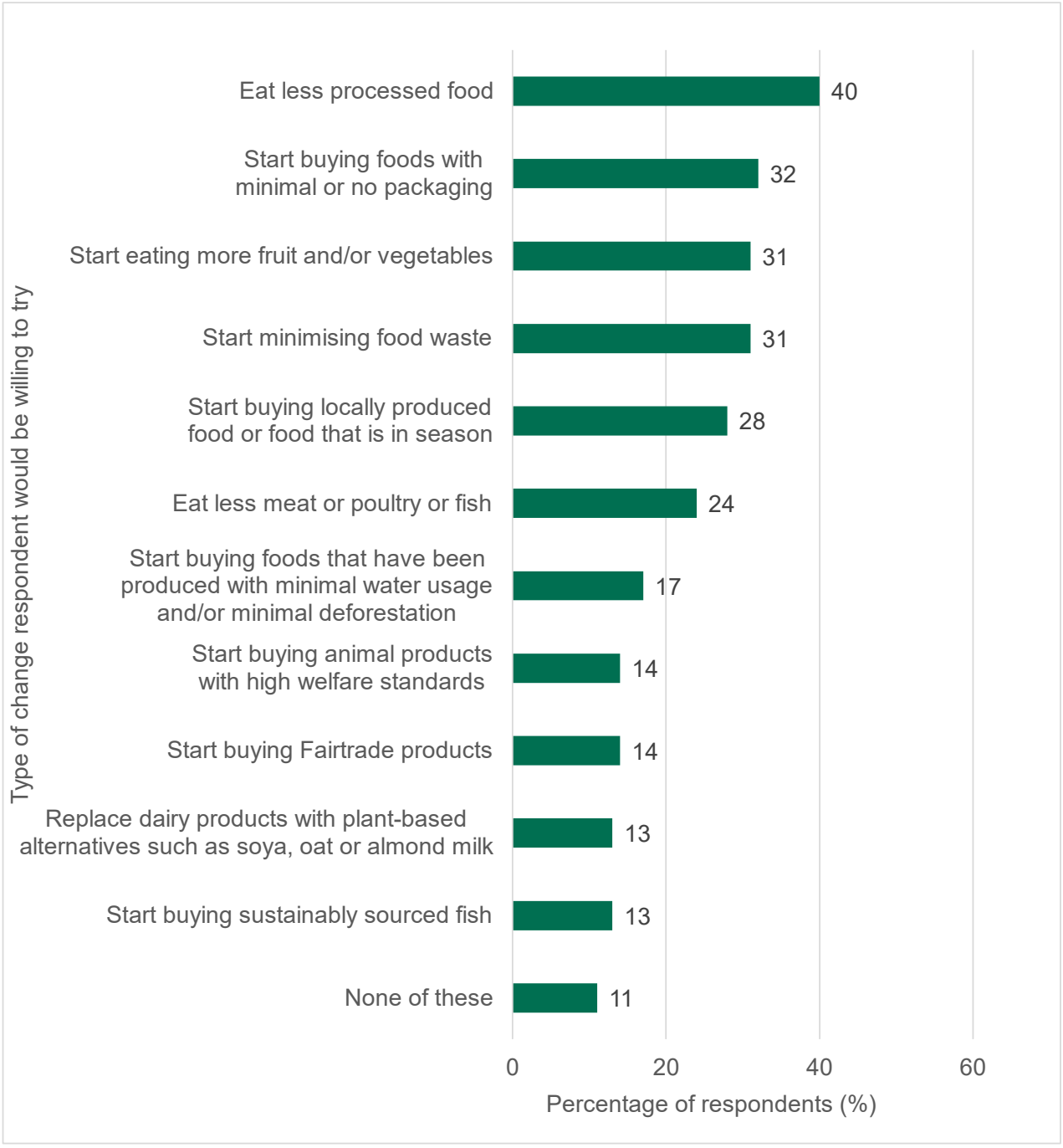
Respondents who reported that they had eaten less processed food, red meat, process meat, poultry, fish or dairy and/or eggs in the previous 12 months were asked, which, if

any of the given options, were the reasons that they had eaten less of that product. The most common reason to have eaten less processed food (75%), processed meat (69%), red meat (57%), dairy and/or eggs (45%) were for health reasons (for example, to be more healthy or lose weight). The most common reason to have eaten less fish (55%) or poultry (43%) was for environmental or sustainability reasons (for example, impact on climate change). Respondents were more likely to report that they had eaten less dairy and/or eggs (21%) because of a bad or unpleasant physical reaction compared to other foods (for example, 1% of respondents had eaten less fish because of the bad or unpleasant physical reaction it causes) (Figure 27)[75].

[75] Question: You have said that you have eaten less …A/B/C/D/E/F… in the last 12 months. Which of the following reasons, if any, explain why you chose to make this change? A) red meat B) processed meat, C= poultry, D=fish, E= dairy and/or eggs, F= processed foods. Responses: For animal welfare reasons, For environmental or sustainability reasons, for example, impact on climate change, For financial reasons, for example, cost of meat or reduced income, For health reasons, for example, to be more healthy or lose weight, For religious reasons, Because of the bad or unpleasant physical reaction eating A/B/C causes me (for example, food intolerance), Because of concerns about food poisoning, Because other people in my household or my friends have reduced their A/B/C consumption or don't eat meat, Because of advice from friends or family, Because of advice from celebrities or influencers, Because of concerns about where meat comes from, Because I wanted a change, Due to pregnancy, None of these. Base A = 908, B= 755, C=389, D=255, E=497, F=1550, all online respondents who have eaten less A/B/C/D/E/F in the last 12 months.

Food-related changes which respondents were willing to try

Figure 28. Changes which respondents were willing to try in the following 12 months.



Source: Food and You 2: Wave 4

Respondents were asked which, if any, of a given list of changes, they were willing to try in the following 12 months. The most common change that respondents reported that

they were willing to try was to eat less processed food (40%). Around a third of respondents reported that they were willing to start buying food with minimal or no packaging (32%), start minimising food waste (31%) or start eating more fruit and/or vegetables (31%) in the following 12 months. However, 11% of respondents reported that they would not be willing to try any of the changes listed in the following 12 months (Figure 28)[76].

Meat alternatives

Meat alternatives are meat-free products that may be eaten instead of meat, such as seitan or vegetarian sausages and burgers (for example, Quorn, Linda McCartney, or Beyond Meat products).

Meat alternative consumption

Respondents were asked if they had ever eaten meat alternatives. Around a third (32%) of respondents reported that they had eaten meat alternatives, 21% of respondents reported that they used to eat meat alternatives but no longer do and 39% of respondents reported that they had never eaten meat alternatives[77].

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[76] Question: Which, if any, of the following changes are you willing to try in the next 12 months? Responses: Stop eating meat or poultry or fish completely, Eat less meat or poultry or fish, Eat/drink less dairy for example, milk, cheese, butter or eggs, Eat less processed food, Replace dairy products with plant-based alternatives such as soya, oat or almond milk, Start eating more fruit and/or vegetables, Start minimising food waste, Start growing fruit and/or vegetables, Start buying animal products with high welfare standards, Start buying fair trade products, Start buying locally produced food or food that is in season, Start buying foods with minimal or no packaging, Start buying foods that have been produced with minimal water usage and / or minimal deforestation, Start buying foods grown organically, Start buying sustainably sourced fish, Other, None of these, Don’t know. Base= 4786, all online respondents, and those answering the `Eating at Home' postal questionnaire.

[77] Question: Have you ever eaten meat alternatives? Responses: Yes, I currently eat meat alternatives; Yes, I used to eat meat alternatives but I don't now; No, I have never

Of the respondents who currently eat meat alternatives, 34% reported eating meat alternatives 2-3 times a week or more often (i.e., every day, most days, 2-3 times a week), 45% reported eating meat alternatives occasionally (i.e., about once a week, 2-3 times a month) and 21% reported eating meat alternatives about once a month or less often (i.e., about once a month, less than once a month)[78].

Respondents who reported that they currently eat meat alternatives were asked why they eat meat alternatives from a list of options. The most common reasons were for environmental or sustainability reasons (41%), for animal welfare reasons (35%) and for health reasons (35%)[79].

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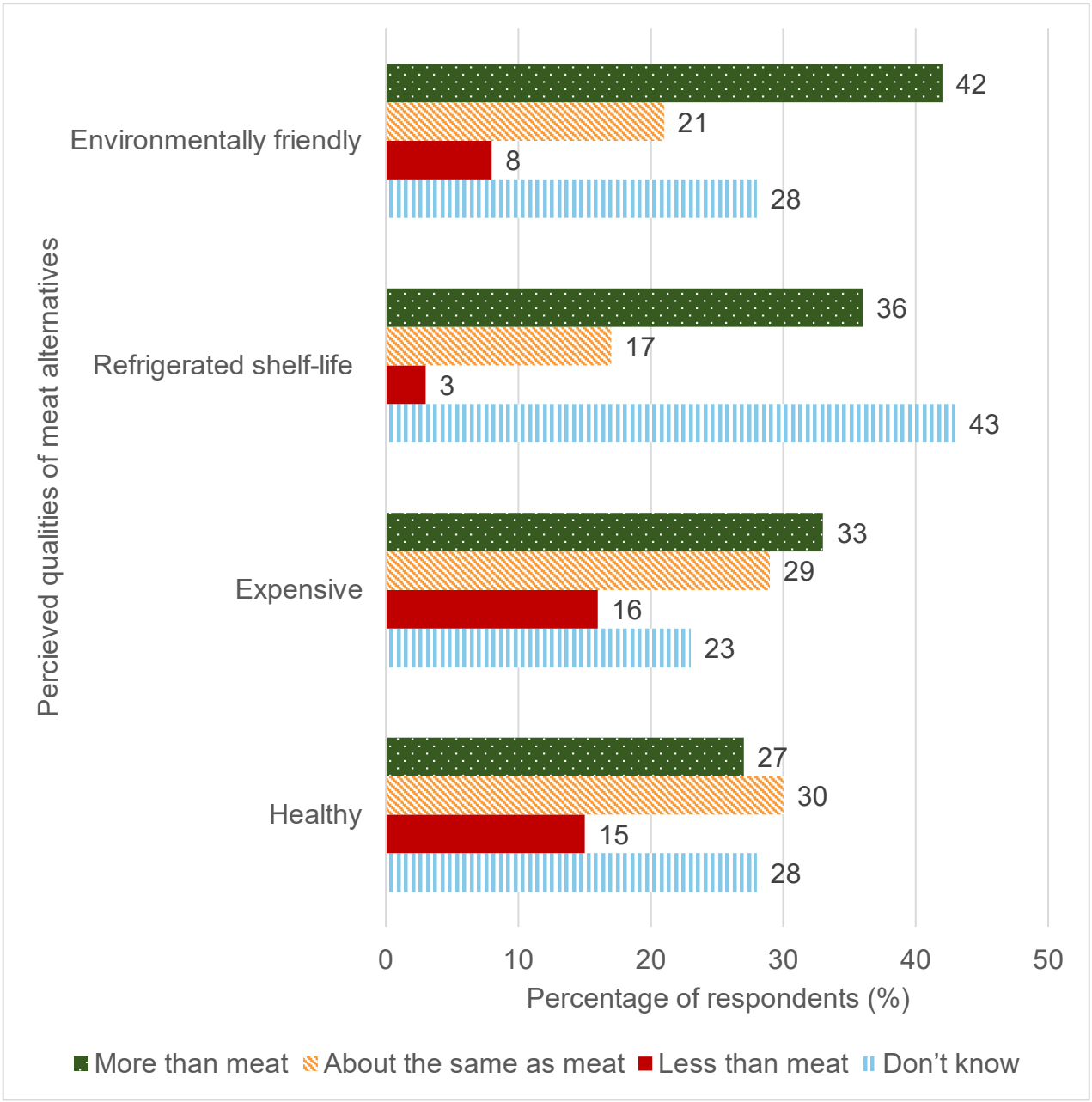
eaten meat alternatives; I have never heard of meat alternatives; Don’t know. Base= 4786, all online respondents, and those answering the `Eating at Home' postal questionnaire.

[78] Question: How often do you eat meat alternatives? Responses: Every day, Most days, 2-3 times a week, About once a week, 2-3 times a month, About once a month, Less than once a month, Don’t know. Base= 1411, all online respondents and those who completed the `Eating at Home' postal questionnaire who currently eat meat alternatives.

[79] Question: Which of the following reasons, if any, explain why you choose to eat meat alternatives? Responses: For animal welfare reasons; For environmental or sustainability reasons, for example, impact on climate change; For financial reasons, for example, cheaper than meat; For health reasons, for example, to be more healthy or lose weight; For religious reasons; Because I don't eat meat; Because of concerns about food poisoning; Because another person has cooked meat alternatives for me or I've cooked them for others; Because of advice from friends or family; Because of advice from celebrities or influencers; Because I like the taste ; Because of concerns about where meat comes from; Because I wanted a change; Due to pregnancy; Other reason; None of these; Prefer not to say. Base= 1126, all online respondents who currently eat meat alternatives

Perceptions of meat alternatives compared to meat

Figure 29. Perceptions of shop-bought meat alternatives compared to meat.



Source: Food and You 2: Wave 4

Respondents were asked how they think meat alternatives compared to meat on several qualities including environmental impact, shelf life, cost, and healthiness. Around 4 in 10 respondents thought that meat alternatives were more environmentally friendly (42%) and would last longer in the fridge (36%) compared to meat. However, many respondents did not know how meat alternatives compare to meat when considering how long refrigerated shop-bought meat alternatives last (43%), how environmentally friendly

(28%), healthy (28%) and expensive (23%) shop-bought meat alternatives are (Figure 29)[80].

Willingness to try lab-grown meat

'Lab-grown meat' is grown in a laboratory from the cells or tissue of a live animal such as a cow, without having to kill the animal.

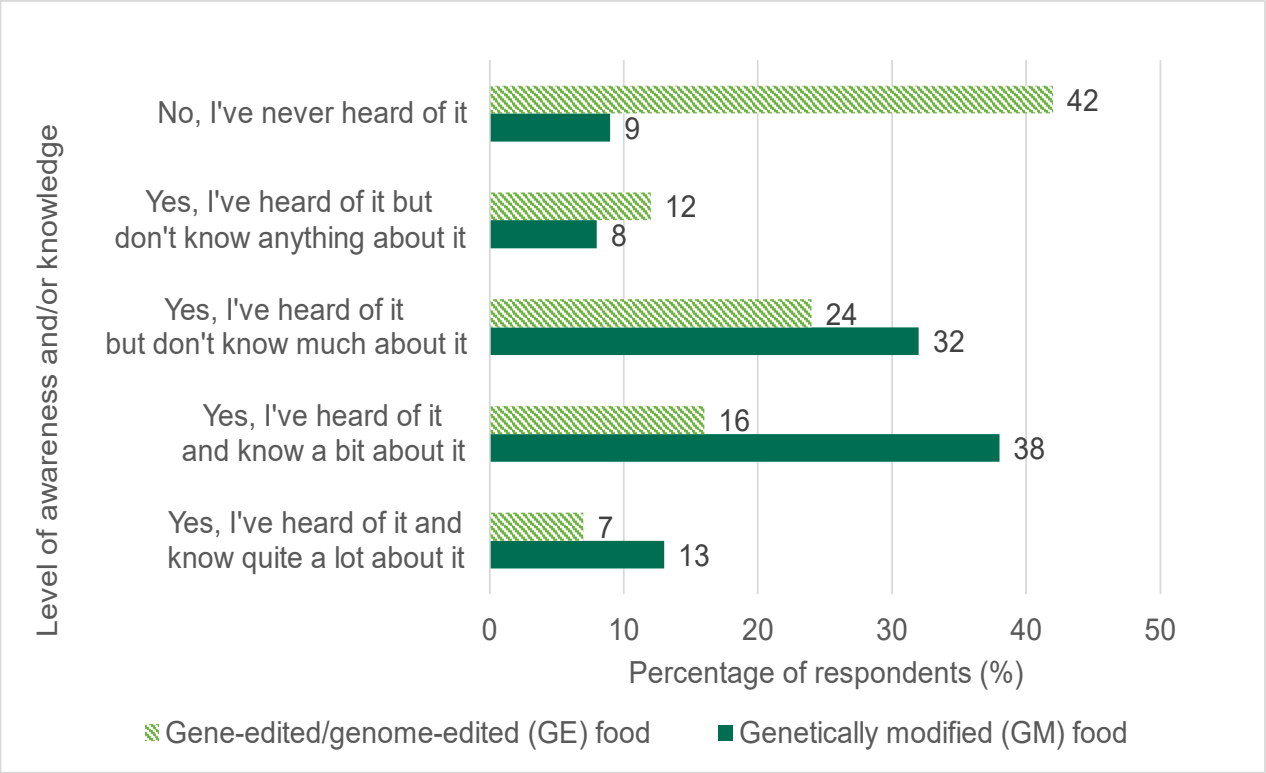
Respondents were asked if they would like to try including lab-grown meat in their diet if it became available in this country. Almost 3 in 10 (28%) respondents reported that they would like to try lab-grown meat (i.e., 9% would definitely like to try; 18% probably would try) and around 6 in 10 (59%) would not (i.e., 21% would probably not like to try, 38% would definitely not like to try). However, 14% of respondents reported that they didn't know whether they would like to try including lab-grown meat in their diet[81].

[80] Question: In general, how A/B/C/D do you think shop-bought meat alternatives are/last compared to meat? A) healthy B) environmentally friendly C) expensive D) long do you think refrigerated. Responses: A/B/C - More…A/B/C…than meat, About the same as meat, Less…A/B/C…than meat, Don't know. D - Meat alternatives last longer than meat in the fridge, Meat alternatives last about the same time as meat in the fridge, Meat alternatives don't last as long as meat in the fridge, Don't know. Base= 3645, all online respondents excluding those who have never heard of meat alternatives.

[81] Question: Would you like to try including lab-grown meat in your diet, if it became available in this country? Responses: I definitely would like to try this, I probably would like to try this, I probably would not like to try this, I definitely would not like to try this, Don't know. Base= 3745, all online respondents.

Awareness of gene-edited (GE) and genetically modified (GM) foods

Figure 30. Awareness and knowledge of genetically modified (GM) and gene-edited/genome-edited (GE) food.



Source: Food and You 2: Wave 4

Respondents were asked if they had ever heard of genetically modified (GM) food and gene-edited or genome-edited food. Respondents reported greater awareness and knowledge of genetically modified (GM) food than gene-edited or genome-edited food (GE). For example, 42% of respondents had never heard of GE food and 9% of respondents had never heard of GM food (Figure 30)[82].

[82] Question: Have you ever heard of...A/B? A) Genetically modified (GM) food? B) Gene-edited or genome-edited food? Responses: Yes, I've heard of it and know quite a lot about it; Yes, I've heard of it and know a bit about it; Yes, I've heard of it but don't know much about it; Yes, I've heard of it but don't know anything about it; No, I've never heard of it. Base= 5796, all respondents.

Annex A: Food and You 2: Wave 4

Background

In 2018 the Advisory Committee for Social Science (ACSS) established a new Food and You Working Group to review the methodology, scope and focus of the Food and You survey. The Food and You Working Group provided a series of recommendations on the future direction of the Food and You survey to the FSA and ACSS in April 2019. Food and You 2 was developed from the recommendations.

The Food and You 2 survey has replaced the biennial Food and You survey (2010-2018), biannual Public Attitudes Tracker (2010-2019) and annual Food Hygiene Rating Scheme (FHRS) Consumer Attitudes Tracker (2014-2019). The Food and You survey has been an Official Statistic since 2014.

Previous publications in this series include:

- Food and You 2: Wave 1 Key Findings (March 2021)
- Food and You 2: Wave 2 Key Findings (July 2021)
- Food and You 2: Wave 3 Key Findings (January 2022)

Methodology

The Food and You 2 survey is commissioned by the Food Standards Agency (FSA). The fieldwork is conducted by Ipsos. Food and You 2 is a biannual survey. Fieldwork for Wave 4 was conducted from 18th October 2021 and 10th January 2022.

Food and You 2 is a sequential mixed-mode 'push-to-web' survey. A random sample of addresses (selected from the Royal Mail's Postcode Address File) received a letter inviting up to two adults (aged 16 or over) in the household to complete the online survey. A first reminder letter was sent to households that had not responded to the initial invitation. A postal version of the survey accompanied the second reminder letter for those who did not have access to the internet or preferred to complete a postal version of the survey. This helps to reduce the response bias that otherwise occurs with online-only

surveys. This method is accepted for government surveys and national statistics, including the 2021 Census and 2019/2020 Community Life Survey. A third and final reminder was sent to households if the survey had not been completed. Respondents were given a gift voucher for completing the survey. Further details about the methodology are available in the Technical Report. Due to the difference in methodology between the Public Attitudes Tracker, FHRS Consumer Attitudes Tracker and Food and You survey (2010-2018) it is not possible to compare the data collected in Food and You 2 (2020 onward) with these earlier data. Comparisons can be made between the different waves of Food and You 2.

The sample of main and reserve addresses[83] was stratified by region (with Wales and Northern Ireland being treated as separate regions), and within region (or country) by local authority (district in Northern Ireland) to ensure that the issued sample was spread proportionately across the local authorities. National deprivation scores were used as the final level of stratification within the local authorities - in England the Index of Multiple Deprivation (IMD), in Wales the Welsh Index of Multiple Deprivation (WIMD) and in Northern Ireland, the Northern Ireland Multiple Deprivation Measure (NIMDM).

Due to the length and complexity of the online questionnaire it was not possible to include all questions in the postal version of the questionnaire. The postal version of the questionnaire needed to be shorter and less complex to encourage a high response rate. To make the postal version of the questionnaire shorter and less complex, two versions were produced. The two versions of the postal survey are referred to as the 'Eating Out' and 'Eating at Home' postal questionnaires. All data collected by Food and You 2 are self-reported. The data are the respondents own reported attitudes, knowledge and behaviour relating to food safety and food issues. As a social research survey, Food and You 2 cannot report observed behaviours. Observed behaviour in kitchens has been reported in Kitchen Life, an ethnographic study which used a combination of observation, video observation and interviews to gain insight into domestic kitchen practices. This study will be updated through Kitchen Life 2, which is in progress now and due to report in 2023.

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[83] A reserve sample of addresses was created to use if the target number of respondents was not achieved from the main sample of addresses.

The minimum target sample size for the survey is 4,000 households (2,000 in England, 1,000 in Wales, 1,000 in Northern Ireland), with up to two adults in each household invited to take part as mentioned above. For Wave 4 a total of 5,796 adults from 4,026 households across England (2,940 adults), Northern Ireland (1,575 adults), and Wales (1,281 adults), completed the survey. An overall response rate of 28.5% was achieved (England 29.8%, Wales 29.1%, Northern Ireland 25.9%). Sixty-five per cent of respondents completed the survey online and 28.5% completed the postal version of the survey. The postal responses from 51 respondents were removed from the data set as the respondent had completed both the online and postal survey. Further details about the response rates are available in the Technical Report.

Weighting was applied to ensure the data are as close as possible to being representative of the socio-demographic and sub-groups in the population, as is usual practice in government surveys. The weighting applied to the Food and You 2 data helps to compensate for variations in within-household individual selection, for response bias, and for the fact that some questions were only asked in one of the postal surveys. Further details about weighting approach used and the weights applied to the Food and You 2: Wave 4 data are available in the Technical Report.

The data have been checked and verified by six members of Ipsos and two members of the FSA Statistics branch. Descriptive analysis and statistical tests have been performed by Ipsos. Quantum (statistical software) was used by Ipsos to calculate the descriptive analysis and statistical tests (t-tests).

The p-values that test for statistical significance are based on t-tests comparing the weighted proportions for a given response within that socio-demographic and sub-group breakdown. An adjustment has been made for the effective sample size after weighting, but no correction is made for multiple comparisons.

Reported differences between socio-demographic and sub-groups typically have a minimum difference of 10 percentage points between groups and are statistically significant at the 5% level ($p<0.05$). However, some differences between respondent groups are included where the difference is fewer than 10 percentage points when the finding is notable or of interest. Percentage calculations are based only on respondents who provided a response. Reported values and calculations are based on weighted totals.

Technical terms and definitions

1. Statistical significance is indicated at the 5% level ($p<0.05$). This means that where a significant difference is reported, there is reasonable confidence that the reported difference is reflective of a real difference at the population level.

2. Food security means that all people always have access to enough food for a healthy and active lifestyle (World Food Summit, 1996). The United States Department of Agriculture (USDA) has created a series of questions which indicate a respondent's level of food security. Food and You 2 incorporates the 10 item U.S. Adult Food Security Survey Module and uses a 12 month time reference period. Respondents are referred to as being food secure if they are classified as having high food security (no reported indications of food-access problems or limitations), or marginal food security (one or two reported indications—typically of anxiety over food sufficiency or shortage of food in the house. Little or no indication of changes in diets or food intake). Respondents are referred to as being food insecure if they are classified is having low food security (reports of reduced quality, variety, or desirability of diet. Little or no indication of reduced food intake) or very low food security (reports of multiple indications of disrupted eating patterns and reduced food intake).

3. NS-SEC (The National Statistics Socio-economic classification) is a classification system which provides an indication of socio-economic position based on occupation and employment status.

4. Index of Multiple Deprivation (IMD) / Welsh Index of Multiple Deprivation (WIMD) / Northern Ireland Multiple Deprivation Measure (NIMDM) is the official measure of relative deprivation of a geographical area. IMD/WIMD/NIMDM classification is assigned by postcode or place name. IMD/WIMD/NIMDM is a multidimensional calculation which is intended to represent the living conditions in the area, including income, employment, health, education, access to services, housing, community safety and physical environment. Small areas are ranked by IMD/WIMD/NIMDM; this is done separately for England, Wales and Northern Ireland.

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