Exploring the perception of small and medium food enterprises in Lincolnshire, UK on the use of front-of-pack nutrition labels by consumers

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Summary
The food and drink industry is the UK’s largest manufacturing sector, and small to medium-sized enterprises (SMEs) play a key role in the UK’s food system. This study investigates food-providing SMEs’ knowledge of nutrition labels and perceptions of the use of front-of-pack nutrition labels in making informed and healthy food choices by consumers. The SMEs were based in Lincolnshire, UK, and comprised food manufacturers (75%), food retailers (14%) and food service providers (11%) (n = 35). A 25-item questionnaire was developed and validated to collect responses. The questionnaire link was disseminated by email and completed online. Comparisons were made between competing answers using Cochran’s Q tests, each with post-hoc pairwise McNemar test comparisons. Confidence intervals were computed using ordinal regressions. More than half of the SMEs’ products (58%) had UK traffic light (TL) colour-coded schemes and % Guideline Daily Amounts (GDAs). The SMEs stated that the TL label was the best format that provided ‘at-a-glance’ information, and this was significantly higher than %GDA and interpretative text (Ps < 0.003). Nearly 49% of the SMEs were unaware of the front-of-pack labels being not mandatory in the United Kingdom. Many (86%) acknowledged that the nutrition information on food products was helpful or very helpful for consumers in making purchasing decisions. The SMEs seemed to place the costs of implementing FOP labels on food products above their helpfulness in making healthier food decisions by consumers. This research is one of the first to investigate the perceptions of SMEs on how consumers utilise nutrition labels when making healthier food choices in the United Kingdom. Government subsidies on the costs incurred by incorporating TL labelling on the products are necessary in order to have front of pack (FOP) labels mandatory in the United Kingdom. Greater food industry involvement in academic and policy-related research is essential to creating a healthier and more sustainable food environment.

Keywords Food providers, front-of-pack nutrition labels, knowledge, nutrition labels, small and medium enterprises.

Introduction
There is well-established evidence that consuming unhealthy foods is linked to rising diet-related illnesses (Hodgkins, 2016; Scott et al., 2018; Pettigrew et al., 2021; Miller et al., 2022). Consumers have started to take the relationship between their health and diets seriously, and the focus is now more on avoiding unhealthy diets. However, food businesses’ main drive is to manufacture more appealing and convenient foods (Severo et al., 2018; Silva et al., 2018). Nutrition labelling has been found to be an effective tool to improve public health since it mediates healthier food choices by consumers and the drive for higher volume and lower prices by manufacturers (Cecchini & Warin, 2016; Buttriss, 2018; Ni Mhurchu et al., 2018).

Nutrition label formats fall into two general groups: the back of package (BOP) and front of package (FOP) labels. In BOP labels, the number of calories, sugar, salt, fat and protein contents a product contains are disclosed (Ogundijo et al., 2021a). FOP labels are majorly graphical representations of these nutrients in the form of colour, shapes, and other illustrations. UK consumers utilise the information on the FOP and BOP nutrition labels during food shopping to monitor
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what they will purchase (Kelly & Jewell, 2019; Department of Health and Social Care (DHSC), 2020; Bhawra et al., 2022). This is the same in the United States, Australia and elsewhere (Dickie et al., 2018; Jones et al., 2019; Jáuregui et al., 2022).

The food industry, public health professionals and government have a collective responsibility to help consumers eat healthily and sustainably (Acton et al., 2018; Trafford & de la Hunty, 2021; Tas & Nehir El, 2024). Consumers are confronted continuously with many unhealthy foods provided by the food system, with a limited understanding of the available healthier alternatives (Barrett et al., 2020). There are efforts from the UK government to reduce the burden of diet-related non-communicable diseases (NCDs) and promote healthy diets. Nevertheless, the role of food manufacturers in encouraging and contributing to healthy eating should not be overlooked (Román et al., 2017; Department for Environment Food and Rural Affairs, 2022; Tas & Nehir El, 2024).

Small and medium enterprises (SMEs) are companies with less than 250 employees; they are sometimes called entrepreneurs (Niemi et al., 2022). The food industry in the United Kingdom is made up of about 4525 food and drink manufacturers and 23 015 retailers regarded as SMEs (including sales via stalls and markets of food, beverages and tobacco products); of these, 78% are in England, and 12% of these are in Lincolnshire (the greatest share of SMEs per region) (Office for National Statistics, 2021). There are several studies on the use of nutrition labelling by food manufacturers. For example, the use of packaging to communicate nutritional information to consumers and an improved, healthier food choice communicated to consumers by store-brand labelled products (Fichera & von Hinke, 2020; Bocca et al., 2024). However, to our knowledge, no study has investigated the perceptions of SMEs on how consumers utilise nutrition labels on their food packages to make healthier food choices in the United Kingdom. The food industry needs to communicate more with other stakeholders to contribute to policies and public health efforts on to what extent nutrition labels improve overall diets and health of consumers (Genannt Bonsmann et al., 2020; Marion et al., 2023). SMEs were chosen as the participants in this study because many of the multinational large-scale companies have already responded publicly to the challenges of nutrition labelling and other public health-related issues (Alvarillo, 2020; Marion et al., 2023). The study sought to know the thoughts of the SMEs on nutrition labelling, which are underrepresented in the public health arena. We hypothesised that food manufacturers are aware that nutrition labels can help consumers make informed and healthy food choices. Therefore, this study evaluated the perceptions of small to medium-sized food manufacturers on the use of nutrition labels by consumers in making informed and healthier food choices. Inferences were also drawn on the food manufacturers and retailers’ concerns if FOP nutrition labels were to be mandatory on all food products in the UK retail market.

Methodology

Participants

Due to difficulty contacting the food businesses directly, the link to the survey was sent to 110 SMEs in Lincolnshire, UK, by email through gatekeeping and snowballing. Lincolnshire has an international reputation for food, fish, and farming and has one of Europe’s largest concentrations of food manufacturing, research, storage and distribution areas (Greater Lincolnshire Local Enterprise Partnership, 2023). The ideal sample size at a 95% confidence interval and 10% margin error was determined to be 92, but 38 responses were received between March and August 2022 (41% response rate). Of the responses received, only 35 (92%) were useable; the remainder were incomplete or from large-scale enterprises (i.e., with more than 250 employees). For convenience, the SMEs (i.e., food manufacturers, retailers, and food service providers) were collectively referred to as ‘food providers’ within the text. This term includes businesses that produce, retail or sell labelled packaged foods and drinks, including sales via stalls, cafes and markets.

Questionnaire development, validation and justification for inclusion

The study employed a web-based questionnaire. As recommended by Siva et al. (2019) and Holtom et al. (2022), instead of conducting interviews and focus groups, a web-based questionnaire is convenient and ideal where anonymity, confidentiality and privacy are critically considered due to the limited availability of the participants (individuals representing the food businesses in our instance) who did not want to provide extra information about their businesses. The 25-item questionnaire (Appendix 1) comprised three sections to: (i) explore the information and the types of nutrition labels used on their products (Section A); (ii) gather the knowledge of food providers on nutrition labelling as a healthier tool for consumers’ food choice (Section B); and (iii) collect information about the company (Section C). The researchers and highly experienced food industry experts (n = 8) reviewed the developed questions (face validity). The experts validated the contents of the questionnaire and provided helpful feedback. The questions’ readability, comprehension and construct were assessed based on the
perceptions of the validation panel. The procedure described by Ogundijo et al. (2021b) was followed for this.

Piloting the questionnaire

Without any preference for any food industry sector, the seafood industry was randomly selected to pilot the survey. A gatekeeper sent the questionnaire link to 11 seafood companies in Lincolnshire, UK. The response rate was low; only one response was received after 6 weeks of piloting, despite several reminder emails sent at 2-week intervals.

Data analysis

An ordinal regression data plot was carried out on the responses, and the error bars were added to the graphs at 95% confidence intervals for the cumulative percentages. Confidence intervals for each boundary in the stacked bar chart were extracted from a single ordinal regression (with no predictors) for each variable to understand the opinions of a broader population of food providers. It was of interest not only how the responses were distributed but also how the responses within each given question were compared. To understand their distributions, they were visualised as bar charts showing the proportion of participants who ticked each item.

To compare the frequency of responses to the different options within each question, a Cochran’s Q test was run across the responses for that one ‘select-all-that-apply’ question, followed by post hoc pairwise McNemar tests (using the ‘rcompanion’ package in R). Post hoc comparisons were adjusted using a ‘false discovery rate’ approach that should allow only 5% of significant results to be false positives.

Results

Company information

Most participants were food manufacturers (75%), followed by food retailers (14%) and food service providers (11%) (Table 1). Directors and managers comprised 40%. Many SMEs had between 50 and 249 employees (74%). Even though the companies’ revenue was stated to be only used for statistical categorisation, 60% of the participants did not disclose this information. More than 25% of the participants manufactured or retailed breakfast cereals (such as porridge, muesli, granola and cornflakes) and ready meals (e.g., sandwiches, pasta and soups). About 18% manufactured or retailed seafood (such as fish and shellfish), meats, crisps and snacks, bread, biscuits, and/or bakery products. The remainder produced food flavours, sauces, purées, dressings and marinades (data not shown).

Front of pack labels used by small to medium-sized enterprises

According to what was stated by the participants, only 95% of the foods from the SMEs had mandatory back-of-pack nutrition labels (BOPNLs) (Fig. 1). More than half of the products (58%) had TL colour-coded schemes and % Guideline Daily Amounts (GDAs). At least 46% of the products had only the TL scheme, and 23% had TL combined with GDA/Reference Intakes (RIs). Nutri-score, interpretive text and Healthier Choice Tick were significantly less commonly used (23%, 20% and 12%, respectively; P < 0.003). A few food providers might have misunderstood the question about the labelling formats because the terms ‘sauce’ and ‘puree’ were incorrectly provided as a response.

Table 1 Company/participant information (n = 35)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Characteristics</th>
<th>Frequency (n)</th>
<th>Per cent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category of SMEs</td>
<td>Food manufacturer</td>
<td>26</td>
<td>75</td>
</tr>
<tr>
<td></td>
<td>Food retailer</td>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Food service provider</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td>Job role of</td>
<td>Director</td>
<td>6</td>
<td>17</td>
</tr>
<tr>
<td>participant</td>
<td>Manager</td>
<td>8</td>
<td>23</td>
</tr>
<tr>
<td></td>
<td>Technical professional</td>
<td>9</td>
<td>26</td>
</tr>
<tr>
<td></td>
<td>Industry professional</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Sales professional</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Administrator</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>6</td>
<td>17</td>
</tr>
<tr>
<td>Department</td>
<td>New product development</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td></td>
<td>Production/operations</td>
<td>15</td>
<td>43</td>
</tr>
<tr>
<td></td>
<td>Sales/finance</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Technical/quality</td>
<td>10</td>
<td>29</td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Engineering</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Marketing</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Number of employees</td>
<td>0–9</td>
<td>5</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>10–49</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>50–249</td>
<td>28</td>
<td>74</td>
</tr>
<tr>
<td></td>
<td>250–499</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>500+</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>I don’t know</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Annual revenue (£)</td>
<td>&lt;100,000</td>
<td>3</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>100,000–499,999</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>500,000–999,999</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>1 Million–99.99</td>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>Million</td>
<td>100,000–499.99</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Million</td>
<td>500 Million and above</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Prefer not to say</td>
<td>12</td>
<td>34</td>
</tr>
<tr>
<td></td>
<td>Don’t know</td>
<td>9</td>
<td>26</td>
</tr>
</tbody>
</table>
Knowledge of front of pack labels and perceptions on consumer use

The SMEs’ responses to how nutrition label formats could provide ‘at-a-glance’ nutrition information for consumers varied (Fig. 2). The UK TL label was said to be the format that best provided ‘at-a-glance’ information about food products, which was significantly higher than %GDA and interpretative text ($P < 0.003$). While TL colour coding was found to be more helpful in making purchasing decisions, its lead over BOP, healthier choice tick and Nutri-score labels was not statistically significant ($P > 0.064$). Significant differences were not seen among %GDAs, interpretive text, and the combination of TL and %GDAs ($P < 0.109$). %GDA format was believed to provide the least ‘at-a-glance’ information, and it was rated significantly lower than Nutri-score ($P < 0.022$), Healthier Choice Tick ($P = 0.013$), and TL ($P = 0.001$).

The SMEs’ understanding of FOP and BOP labelling is presented in Fig. 3. A higher number of SMEs (31%) claimed that the mandatory BOP format showed the healthiness of food products compared with 19% for the FOP. Six of them (17%) claimed that BOP was ineffective in showing food products’ nutritional quality, and 21% claimed that BOP was as effective as FOP labels. Several SMEs (12%) were unsure regarding nutrition labels’ effectiveness in demonstrating the nutritional quality of foods. Surprisingly, only 9% of the food providers claimed that nutrition information does not need to be declared on the front of all pre-packed foods in the United Kingdom, with 49% not knowing whether this was mandatory (Question B4, Table 2).

Table 2 shows the responses to the questions (B5 to B9) that gauged the SMEs’ perceptions towards consumers’ use of nutrition labels (NLs). The ordinal variables of the responses are presented in Table 3. About half (51%) of the participants affirmed that the nutritional information on food products is easy or very easy for consumers to understand (Question B5). Many food providers (86%) acknowledged that the nutrition information on food products was ‘helpful’ or ‘very helpful’ for consumers in making purchasing decisions (Question B6). About 89% agreed that the TL colour-coded labelling format would be effective in assisting consumers in making informed, healthier choices if it was mandated to be included on all food products (Question B8). In fact, all participants (100%) agreed that the use of TL colour coded labels (which are recommended by the UK government) would be effective or very effective in assisting consumers to make informed, healthier choices if they were mandated on all food products. However, 40% claimed that consumers would not purchase the same products if their company’s labelling formats changed, and the majority (60%) stated that SMEs would incur high costs if all products adopted any one of the FOP formats, including the UK TL format (Questions B7 and B9).

Discussion

Even though 14% of the food providers in this study appeared to be unaware of the importance of nutrition labelling to consumers, their knowledge of nutrition labels as an effective and valuable tool is consistent with existing consumer studies (Wartella et al., 2011; Food Standard Agency, 2016; Acton et al., 2018). This could be because some participants made food purchasing decisions (as consumers) within their households. Most SMEs acknowledged the importance of BOP nutrition labelling, which has been compulsory on all pre-packed foods in the European Union since December 2016 (European Union (EU) Regulation No. 1169/2011).

Most foods (95%) produced by the food providers were reported to have mandatory BOPNLs; this result
is consistent with our previous finding that 97.1% of the food products analysed in the UK retail market (n = 500) had BOP nutrition information (Ogundijo et al., 2021a). The fact that most products had BOPNLs showed the level of compliance of the food industry with the aforementioned regulation. Some foods (such as tea and coffee) are exempt from having BOPNLs due to their insignificant or negligible nutrient content. This possibly contributed to the remaining 5% that did not carry BOPNLs in this study.

FOPNLs can drive product reformulation in the food industry to manufacture products with low fat, saturated fat, salt and sugar content, thereby helping to improve the overall healthiness of our diets (Brownell & Koplan, 2011; Croker et al., 2020; European Heart Network (EHN), 2020; Song et al., 2021). The benefits of FOP labels, especially the TL labels, in making healthier food choices have been reported across the world (Australia, Canada, UK, USA, etc.) (Emrich et al., 2017; Moore et al., 2018; Kelly & Jewell, 2019). However, it is surprising that the UK government did not mandate FOPNLs when the United Kingdom was a member of the European Union (EU). The reason for this was speculated to be the claim that the UK’s FOP TLs did...
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Table 2 Food providers’ knowledge of nutrition labels

<table>
<thead>
<tr>
<th>Questions</th>
<th>Responses (%)</th>
<th>Don’t Know (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>B4. Do you think that it is necessary for nutrition information to be declared on the front of all pre-packed foods in the United Kingdom?</td>
<td>Yes: 42.86% (n = 15)</td>
<td>No: 8.57% (n = 3)</td>
</tr>
<tr>
<td>B5. In your opinion, how do you feel that consumers find the nutritional information on food products?</td>
<td>Very easy: 11.43% (n = 4)</td>
<td>Easy: 40.00% (n = 14)</td>
</tr>
<tr>
<td>B6. How helpful do you feel that nutritional information on labelling assists consumers to make purchasing choices?</td>
<td>Very helpful: 8.57% (n = 3)</td>
<td>Helpful: 77.14% (n = 27)</td>
</tr>
<tr>
<td>B7. In your opinion, do you feel that consumers would still purchase the same products even if the labelling format had changed?</td>
<td>Very likely: 8.57% (n = 3)</td>
<td>Likely: 42.86% (n = 15)</td>
</tr>
<tr>
<td>B8. The use of traffic light colour-coded labels (labels with red, amber, and green) is recommended by the UK government, but is it still voluntary. In your opinion, how effective do you think it would be in helping consumers to make informed choices if this was made mandatory on all UK food products?</td>
<td>Very effective: 14.29% (n = 5)</td>
<td>Effective: 74.29% (n = 26)</td>
</tr>
<tr>
<td>B9. In your opinion, would your company incur high costs if all products adopted any one of the ‘Front-of-Pack’ (FOP) formats, including the UK Traffic Light System (Green-Amber-Red)?</td>
<td>Yes: 60% (n = 21)</td>
<td>No: 20% (n = 7)</td>
</tr>
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</table>

not meet the provisions of EU Regulation No. 1169/2011 Subsection 38 (Jebb et al., 2013; Cuocolo, 2014). The Italian authorities stated that FOP TLs would discriminate against exported Italian food products to the United Kingdom and cause a reduction of up to 11.2% of their total export (Italian Delegation Report, 2014; Cole et al., 2019). The expectation is for the UK government to consider the recommendations of the existing studies and mandate TL, Nutri-Score or warning labels after Brexit, but this has not been the case so far (DHSC, 2013; DHSC, 2020; Song et al., 2021).

The concerns of food businesses regarding mandating FOPs should be addressed. These were included in the second consultation document by the Department of Health & Social Care (DHSC) and the Department of Health (DoH) (DHSC, 2020). The stance of the SMEs in this study appears to be that not all food products in the retail market must carry FOP labels (Table 2). The high cost of including FOP on all food products, a point raised by the SMEs in this study, is consistent with earlier studies (EHN, 2020). Moreover, the SMEs believed some of their food products that carry red lozenges may not be bought by consumers like other foods (Thow et al., 2018; Werle et al., 2022). Germany’s food industry was also against TLs because most food businesses feared that consumers would be prejudiced against their products with red lozenges (Drescher et al., 2014).

The cost associated with the inclusion of FOPs on packaging have already been reported as financial and time-frame costs (EHN, 2020). The enforcement costs, the costs to the business due to reformulation and the familiarisation time with any changes (both for consumers and companies) should be considered. The UK government must act on the recommendations of the research community and the report of the second consultation of the Food Standard Agency (FSA) on making FOP mandatory on all packaged food products (DHSC, 2020). The UK government can subsidise the costs of implementing new label formats and reformulations by the food and drink industries in order to mandate FOP nutrition labels. The current study joins other existing studies (Emrich et al., 2017; Song et al., 2021), to clamour for making TL labelling mandatory on all food products in the United Kingdom, as the authors believe that its potential benefits for consumers outweigh its potential costs for food businesses.

Limitations and implications for practice

There were some limitations to the study. Firstly, the response rate from the SMEs was low despite the extended closing date for the completion of the questionnaire and several reminders to encourage SMEs to participate. Low response rates in other studies feature in this study (EHN, 2020). Moreover, the SMEs believed some of their food products that carry red lozenges may not be bought by consumers like other foods (Thow et al., 2018; Werle et al., 2022). Germany’s food industry was also against TLs because most food businesses feared that consumers would be prejudiced against their products with red lozenges (Drescher et al., 2014).

Future studies should find ways to encourage greater involvement of the food industry in academic and policy-related research (Gibson-Moore & Spiro,
2021). Secondly, there are limitations inherent to the use of questionnaires, such as participants not choosing answers that reflect their actual intentions and experiences (Kiesel et al., 2011; Breakwell et al., 2020).

We therefore acknowledge the impact of the low response rate on limiting the generalisability of the results for SMEs in the rest of the United Kingdom. However, this study is important in conveying the perception of SMEs who do not have much representation when compared to larger-scale multi-national food businesses. The study is also significant in creating awareness of the grand role of food businesses in shaping the food systems and creating the food environment where consumers source their food from. This study would be extended to other geographical areas in the United Kingdom and elsewhere to obtain a more complete picture of the perceptions of food manufacturers. With this study, it is hoped that food manufacturers would acknowledge that their products contribute significantly to public health. We also support the notion that the staff who work in the food industry should be trained to have more nutritional knowledge, since they are the gatekeepers to consumers food choices. The UK government and public health practitioners have taken actions to ensure the wider use of BOP and FOP by consumers, but further actions are needed to ensure that the FOPNLs are mandatory on all food products. The government should encourage food providers to use FOPNLs on their food products. It is also essential that the government reinforce policies and regulations on producing healthy food products by either incentivising or tax-scare forcing food manufacturers.

**Conclusions**

This study evaluated the knowledge of small to medium-sized food manufacturers, retailers and food service providers on the use and roles of nutrition labels in making informed and healthier food choices by consumers. Although the food providers stated that nutrition labels influenced consumers to make healthier food choices, they seemed to place the costs of implementing the front-of-pack labels on food products above their helpfulness in making healthier food decisions. This study is consistent with some empirical studies that show that front-of-pack traffic light nutrition labels can provide ‘at-a-glance’ nutrition information, and their presence on all packed food products can promote healthier choices.

Educating employees in the food industry on nutrition and healthy eating is vital. This will enable them to acknowledge and better appreciate their critical role (as an individual and company) in creating the food environment from which consumers derive all their food choices. The government should subsidise additional costs by including traffic light labelling on packaging. Finally, greater involvement of the food industry in academic and policy-related research is anticipated, as this is essential to creating and
maintaining a healthier and more sustainable food environment.

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Author contributions
Daniel A. Ogundijo: Conceptualization; investigation; writing – original draft; methodology; validation; formal analysis; data curation; writing – review and editing. Ayten A. Tas: Conceptualization; methodology; validation; writing – review and editing; supervision; resources; investigation. Bukola A. Onarinde: Conceptualization; methodology; supervision; resources.

Conflict of interest
The authors declare no conflict of interest.

Ethics statement
Participation in this research was voluntary, anonymous and confidential, and the participants were asked to consent before completing the survey. The ethics reference number for the study was UoL/2151_2021.

Peer review
The peer review history for this article is available at https://www.web of science. com/api/gateway/wos/peer-review/10.1111/ijfs.17166.

Data availability statement
The data that support the findings of this study are available from the corresponding author upon reasonable request.

References

This study is on consumer perceptions on how front-of-package nutrition labels influence healthier food choices. The food industry, public health professionals, and government have a collective responsibility to help consumers choose and eat healthily.


This policy paper was used because it discusses the effort of the UK government on the use of front of pack nutrition labels by the consumers and how they can make front of pack labels mandatory for food businesses to put front of pack labels on all food products in the UK.


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Appendix 1

Food providers’ questionnaire, Doc DOQN4

Title of research: Measuring manufacturers’ and retailers’ perceptions of nutritional labelling and their response to the increased public interest in making informed food choices in the United Kingdom.

We would like to invite you to take part in our research study. Before you proceed, we would like you to understand why the research is being carried out.

What is the purpose of the study? This study explores the knowledge by food manufacturers and retailers on the use of nutrition labels and how they have responded or are responding to the increased public interest in making informed food choices.

Do I have to take part? No, it is up to you to decide whether to take part. If you do decide to take part, you will be asked to sign a consent form. You are free to withdraw at any time, without giving any reason, and without your legal rights being affected.

What will happen to me if I take part? You will be asked to fill out a self-reporting questionnaire regarding your experiences and perceptions of the nutrition labelling culture in your organisation. Your participation will take approximately 12–15 min. There are no right or wrong answers; we are simply interested in your honest opinions. Your participation is completely anonymous.

Will I receive any incentive after I take part? Participants will not be paid or offered any other incentive to participate in the study.

What are the possible disadvantages and risks of taking part? The project is considered low risk based on the topics and methods.

Will my taking part in the study be kept confidential? Your information will be kept completely confidential, and we shall follow all appropriate ethical and legal practices as required by the University of Lincoln.

Privacy notice: The University of Lincoln is the lead organisation for this study. The university’s Research Participant Privacy notice https://ethics.lincoln.ac.uk/researchprivacynotice/explains how we will be using information from you in order to undertake this study and will be the data controller for this study. This means that we are responsible for looking after your information and using it properly.

What will happen to the results of the research study? The results of the research study will only be used for statistical analysis and academic purposes.

Who is organising and funding the research? This research is organised by the University of Lincoln and self-funded by the researcher.

Who has reviewed the study? All research conducted by the University of Lincoln is looked at by an independent group of people, called the Research Ethics committee to protect your interests. The ethics committee approval reference for this study is 2151.

What if there is a problem? If you have a concern about any aspect of this study, you should ask to speak to the researcher who will do his best to answer your questions. The researcher contact detail is provided at the end of this information sheet. If you remain unhappy and wish to complain formally, you can do this by contacting ethics@lincoln.ac.uk

If you feel that we have let you down in relation to your information protection rights, then please contact the Information Compliance team by email on compliance@lincoln.ac.uk or by post at Information Compliance, Secretariat, University of Lincoln.

You can also make complaints directly to the Information Commissioner’s Office (ICO). The ICO is the independent authority upholding information rights for the United Kingdom. The website is ico.org.uk and their telephone helpline number is 0303 1 231 113.

Should you have any queries or concerns, please contact Daniel Ogundijo.

Email: dogundijo@lincoln.ac.uk

Declaration of consent

I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason, without my legal rights being affected.

Please accept to give consent ☐

Is your company a small and medium-sized enterprise (SME)?

The usual definition of small and medium-sized enterprises (SMEs) is any business with fewer than 250 employees. House of Commons Library Small businesses and the UK economy Standard Note: SN/EP/6078 2014.

Yes ☐

No ☐

How would you describe your company? Please tick the most appropriate

Manufacturer
Retailer
Restaurant
Food service

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Section A. Factual information on products and labels.

A1. Which of the following categories best describes the products that you process, produce or manufacture? Please select all that apply.

- Alcoholic drinks, for example beer, cider, spirits, vodka, gin, tequila, rum, whisky, brandy, etc. Beans and other pulses, for example lentils
- Bread, biscuits and/or bakery products
- Breakfast cereals, for example porridge, muesli, granola, and cornflakes
- Canned or jarred food products such as meat, fruits, and vegetables
- Crisps and snacks
- Dairy products, for example milk, yoghurt, cream, cheese, kefir, whey, fromage frais, and butter
- Eggs
- Food supplements and products that boost immunity
- Herbs and spices
- Meats
- Non-alcoholic drinks in Group A, for example coffee, tea, chocolate, cocoa products, etc.
- Non-alcoholic drinks in Group B, for example carbonated drinks or other soft drinks
- Nuts and seeds
- Ready meals, for example sandwiches, pastas, and soups
- Seafoods such as fish and shellfish
- Spreads such as jams, jellies, yeast extract and margarine
- Vegetable oils
- Water, for example sparkling water, mineral water
- Other

If ‘Other,’ please give the name of the product here _____

A2. Which of the nutrition labelling format(s) are used on your company’s food products? Please select all that apply.

- Back of pack labels
- Combined Traffic Light (TL) colour coding system and % Guideline Daily Amounts (GDAs)
- Healthier choice tick Interpretive text (such as high, medium or low)
- Nutri-score
- Percentage Guideline Daily Amounts (GDAs)/Reference Intakes (RIs)
- Traffic light (TL) colour coding system
- Other

If ‘Other,’ please give the name of the product here _____

A3. What percentage of the products manufactured by your company carries the UK Government’s Traffic Light Scheme labelling?

- 1%–100% _____

Section B. Knowledge of food producers on nutrition labels.

B1. In your opinion, which of the following provides consumers with ‘at-a-glance’ nutritional information to make informed choices? Please select all that apply.

- Back of pack labels
- Combined TL and %GDA
- Healthier choice tick
- Interpretive text (such as high, medium or low)
- Nutri-score
- Percentage Guideline Daily Amounts (GDAs)/Reference Intakes (RIs)
- Traffic light (TL) colour coding system

B2. In your opinion, do you consider consumers more likely to make a positive purchase decision if nutrition informational is clearly marked on the front of pack?

- Very Likely
- Likely
- Unlikely
- Very Unlikely
- Don’t know

B3. Which of the following statements best represents your understanding of nutritional labelling? Please select all that apply.

- Products with “Front-of-Pack (FOP)” labelling show improved nutritional quality
- Products with “Back-of-Pack (BOP)” labelling show improved nutritional quality
- BOP labelling is not effective in showing the nutritional quality of products
- FOP labelling is effective in showing the nutritional quality of products just as BOP
- Don’t know
Do you think that it is necessary for nutrition information to be declared on the front of all pre-packed foods in the United Kingdom?

- Yes
- No
- Don’t know

Please briefly give a reason if your answer is Yes or No ______

In your opinion, how do you feel that consumers find the nutritional information on food products?

- Very easy
- Easy
- Difficult
- Very difficult
- Don’t know

How helpful do you feel that nutritional information on labelling assists consumers in making purchasing choices?

- Very helpful
- Helpful
- Not at all helpful
- Don’t know

In your opinion, do you feel that consumers would still purchase the same products even if the labelling format had changed?

- Very likely
- Likely
- Unlikely
- Very Unlikely
- Don’t know

The use of traffic light colour coded labels (labels with red, amber and green) is recommended by the UK government, but it is still voluntary. In your opinion, how effective do you think it would be in helping consumers to make informed choices if this were made mandatory on all UK food products?

- Very effective
- Effective
- Not at all effective
- Don’t know

In your opinion, would your company incur significant costs if all products adopted any one of the “Front-of-Pack” (FOP) formats including the UK Traffic Light System (Green-Amber-Red)?

- Yes
- No
- Don’t know

Section C. Demographic information.

We would like to know about you. This data will be kept anonymously and only be used for statistical analysis.

Which of the following headings/categories do you belong to?

- Administrator
- Director
- Industry Professional
- Manager
- Sales Professional
- Technical Professional
- Other

If you describe your role as other, please provide it here ______

Which of the following department do you work in?

- Engineering
- New Product Development
- Production/Operations
- Sales/Finance
- Marketing
- Technical/Quality
- Other

If you selected ‘Other’ above, please explain it here ______

Approximately, how many people work in your organisation?

- 0–9
- 10–49
- 50–249
- 250–499
- 500+
- I don’t know
C4. Approximately what is the annual revenue for your organisation? Expressed in GPB (£)

- <100 000
- 100 000–499 999
- 500 000–999 999

- 1 Million–99.99 Million
- 100 Million–499.99 Million
- 500 Million and above
- Prefer not to say
- Don’t know