



## “It was a force for good but...”: a mixed-methods evaluation of the implementation of the high in fat, sugar and salt (HFSS) legislation in England

Alice R. Kininmonth<sup>a,b,1,3,\*</sup> , Rebecca A. Stone<sup>c,1</sup> , Victoria Jennesson<sup>a,b</sup>, Emily Ennis<sup>c</sup> , Robyn Naisbitt<sup>b,d</sup>, Alexandra M. Johnstone<sup>f</sup>, Michelle A. Morris<sup>a,b,2</sup> , Alison Fildes<sup>e,2</sup> , the DIO Food Team

<sup>a</sup> School of Food Science and Nutrition, Faculty of Environment, University of Leeds, United Kingdom

<sup>b</sup> Leeds Institute for Data Analytics, University of Leeds, United Kingdom

<sup>c</sup> School of Geography, Faculty of Environment, University of Leeds, United Kingdom

<sup>d</sup> Consumer Data Research Centre, University of Leeds, United Kingdom

<sup>f</sup> The Rowett Institute, School of Medicine, Medical Sciences and Nutrition, University of Aberdeen, United Kingdom

<sup>e</sup> School of Psychology, Faculty of Medicine and Health, University of Leeds, United Kingdom

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### ABSTRACT

**Background:** In 2022, legislation in England restricted products high in fat, sugar, or salt (HFSS) in prominent store locations. This study explores retail sector (including enforcement of legislation in retail) responses to the legislation's implementation.

**Methods:** Four major UK retailers – ASDA, Morrisons, Sainsbury's and Tesco – completed business-level online surveys. Interviews were conducted with representatives from three retailers (n = 13; Asda, Morrisons, Sainsbury's), the British Retail Consortium (n = 1), and primary authority enforcement (n = 1) (N = 15). Data were collected between July and November 2024. Findings informed co-production workshops (n = 3) to develop policy recommendations.

**Results:** Stakeholders supported legislation aims but voiced concerns about complexities with interpretation and implementation, limited communication with government, access to product nutrition data, and delays to guidance. Retailers utilised various HFSS product promotional strategies while achieving compliance. Retailers reported very limited enforcement. These findings were synthesised and facilitated the development of seven policy recommendations through co-production workshops between academics and the Institute of Grocery distribution.

**Conclusion:** HFSS legislation represents a landmark shift in regulation of the retail food environment, but clearer, timely guidance, data provision, and transparent co-production with actors cognisant of the food sector is needed to ensure legislation can be effectively implemented, enforced and evaluated.

### 1. Introduction

The food environment, encompassing physical, economic, political, and sociocultural contexts that influence food choice, has been implicated in the rising rates of obesity globally (Jones et al., 2007; Pineda et al., 2024). Obesogenic food environments promote the

overconsumption of less healthy, energy-dense, nutritionally poor foods (Pineda et al., 2024). Frequent intakes of energy-dense foods and beverages, that are high in fat, sugar, and salt (HFSS), are at odds with dietary recommendations, and contribute to obesity and non-communicable diseases (Lobstein et al., 2004).

Retail food settings are major contributors to the obesogenic

\* Corresponding author at: School of Food Science and Nutrition, Faculty of Environment, University of Leeds, Leeds LS2 9JT, United Kingdom.

E-mail address: [a.r.kininmonth@leeds.ac.uk](mailto:a.r.kininmonth@leeds.ac.uk) (A.R. Kininmonth).

<sup>1</sup> Denotes joint first author.

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<sup>3</sup> Denotes joint senior author.

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environment (Cooksey-Stowers et al., 2017). Extensive displays of unhealthy snack foods and soft drinks have been observed within supermarkets internationally, with UK stores dedicating among the largest proportion of shelf space to these products (Thornton et al., 2013). Given Supermarkets dominate the grocery market in high-income countries the retail food environment offers a unique arena for implementing interventions to promote healthier and more environmentally sustainable consumer purchasing decisions at scale.

Supermarkets use well-established retail strategies to influence customer purchasing behaviour (Story et al., 2008), which are based on four aspects of marketing – product (e.g., range of products), price (e.g., price of a product), promotion (e.g., advertising), and placement (e.g., product positioning) (Glanz et al., 2012). Research shows these strategies disproportionately promote sales of less healthy foods, with between 44 and 70% of products promoted through placement classified as unhealthy (The Food Foundation, 2024; The Obesity Health Alliance, 2018). Studies investigating the efficacy of product placement strategies for encouraging purchases of healthier products, or conversely restricting prominent placement of unhealthy products, have found evidence for positive impacts on diet-related outcomes. However, the quality of evidence is mixed and the impacts of product placement strategies on dietary inequalities, particularly for those facing food insecurity, remain unclear (Shaw et al., 2022).

On the 1st of October 2022, the government in England was the first to introduce legislation restricting the placement of foods and non-alcoholic drinks classified as HFSS in prominent locations, both in-store and online (Department of Health and Social Care, 2023). The HFSS legislation intends to discourage impulse purchasing and nudge customers towards healthier food choices. Retail businesses with over 50 employees and premises greater than 2000 square foot are prohibited from placing HFSS products in prominent locations (i.e. store entrances, end-of-aisle, and checkout) and in online equivalent locations (i.e. website homepage, advert/pop-up banners and online checkouts). The legislation applies to pre-packaged products in 13 categories (see Supplementary Table 1); soft drinks with added sugar, crisps and savoury snacks, breakfast cereals, confectionery, ice creams and ice lollies, cakes, biscuits, morning goods, desserts and puddings, yoghurts, pizza, potato-based products, and ready meals (Department of Health and Social Care, 2023). Loose products (e.g., pick and mix) or products packaged in-store (e.g., in-store bakery items) are exempt from restrictions. Within these categories, products are classified as HFSS if they score 4 or more for food or 1 or more for drinks based on the 2004/5 Nutrient Profile Model (NPM) (Department of Health, 2011). The model uses a scoring system where points are deducted for negative components (energy, saturated fat, total sugar and sodium) and added for beneficial components (fruit, vegetables, nut content, fibre and protein).

Implementation of national food policies is complex, influenced by diverse stakeholder interests, capacities, and contextual factors (Kingdon, 2011). Previous research examining health and environmental policies has identified barriers to effective policy implementation, including limited enforcement mechanisms, resource constraints, competing political priorities and resistance from industry (Augustenborg et al., 2025; Ng et al., 2022). Comparable policy contexts, such as the introduction of deposit-return schemes for beverage containers, bans on free plastic bags or the UK soft drinks industry levy, demonstrate that retailers and manufacturers often adapt through product reformulation, changes to practices, cost-shifting to consumers, absorbing the costs themselves or strategic marketing responses (Alvarado et al., 2023; HM Revenue and Customs, 2016; Lintott, 2019; Scarborough et al., 2020). These findings suggest implementation processes must be considered within a broader systems or complexity perspective, which accounts for dynamic feedback and adaptive behaviours among policy actors (Rutter et al., 2017). Beyond understanding if the HFSS legislation is effective in changing purchasing behaviour, it is important to explore if and how it contributes to reshaping the retail food system.

Critical examination of responses to consultations around previous UK policy action to address HFSS product promotion and sales, including the restrictions on advertising of HFSS products to children and the Soft Drinks Industry Levy, have highlighted industry stakeholders' awareness of the complexity of implementing these policies along with the use of discursive strategies to argue against the legislations' potential effectiveness, while proposing alternative non-policy based solutions (Carters-White et al., 2021; Jawad et al., 2023). However, the key industry stakeholders impacted by previous legislation have primarily been manufacturers who reformulated products rather than retailers (Jawad et al., 2023). Additionally, less attention has been paid to understanding how industry stakeholders' approach interpretation and implementation of legislation following its introduction. Research prior to the introduction of the HFSS product placement legislation (Dhuria et al., 2024; Muir et al., 2023) indicated stakeholders felt it had great potential to reduce impulse purchasing of unhealthy food. Yet, there were concerns the legislations' complexity and ambiguities might make it difficult to implement and enforce consistently (Muir et al., 2023). However, no research has been conducted since the implementation of the legislation, which limits evaluation insights. To address this, the current study conducted surveys and interviews post-implementation with UK retail sector representatives (including enforcement of legislation in retail) to gain contextual insights into the perceived reality of implementing the HFSS legislation in relation to the following research questions:

What were the barriers to retail sector in implementing the HFSS legislation?

What resources were required to implement the HFSS legislation?

What were the range of interpretations and implementation approaches applied by the retail sector in relation to the HFSS legislation?

Additionally, findings from the surveys and interviews were utilised to co-develop policy recommendations for future legislation. This research is timely, ahead of phase two of the legislation, expected in England in October 2025 (Department of Health and Social Care, 2023, 2024), and the implementation of HFSS legislation in the devolved nations (Welsh Government, 2025).

## 2. Methods

The study protocol is preregistered on the Open Science Framework and is available at <https://doi.org/10.17605/OSF.IO/KTSZA>.

### 2.1. Design, recruitment, and data collection

Four major UK supermarkets – Asda, Morrisons, Sainsbury's, and Tesco – who collectively represented ~65% of the grocery market (Kantar World Panel, 2024) have committed to contributing store level food and drink sales data for the quantitative analysis of the impact of the HFSS legislation as part of this wider project, DIO Food (Jenneson et al., 2024). As such, these four retailers were invited to take part in the business-level surveys and semi-structured interviews via key senior nutrition representatives at each participating retailer. All four retailers completed the retailer survey, but only three retailers participated in the interviews. Following consultation with key project stakeholders, we extended interview recruitment to include a representative from a trade association (hereafter referred to as the British Retail Consortium [BRC]) and a primary authority trading standard (hereafter referred to as enforcement officer).

Stakeholders were provided with a participant information sheet and a consent form prior to taking part in the retailer survey and interviews. Written informed consent was obtained in advance of completion of the retailer survey and interviews. Ethical approval was granted from the University of Leeds, School of Psychology Ethics Committee (PSCETHS-1005).

## 2.2. Retailer business-level surveys

Between July 2024–November 2024, key senior nutrition representatives within each participating retailer were sent an electronic version of the retailer survey and asked to share it in an online document space, such as OneDrive, with as many relevant colleagues as necessary to ensure accurate and full completion. This approach was taken because it was clear from discussions with senior retail nutrition representatives that due to job specialization, individual staff would only be able to accurately respond to sub-sections of the survey. All participating staff were invited to anonymously contribute to a single retailer-level survey response and asked to provide responses within 4 weeks. No data were collected on the number of participating staff that fed into the survey as this was organised on the retailer's side and identities of individual contributors were kept anonymous.

The survey was co-produced in partnership with the wider project team (academic members of the DIO-Food research consortium (Crabtree et al., 2024)) and with the social impact organisation, IGD (the Institute for Grocery Distribution), who work alongside the food and grocery industry undertaking research for public benefit. Questions were about guidance and support to prepare for the HFSS legislation and business-level strategic responses, including reformulation of products, changes to store layouts and store size, changes to internal systems and processes, experiences of enforcement and the costs involved in implementation of the legislation. Response options were binary (yes/no) or multiple-choice, with free text boxes for additional information. The full retailer survey is available at: <https://doi.org/10.17605/OSF.IO/KTSZA>.

## 2.3. Individual-level interviews

Using the key senior nutrition representatives at the three retailers who agreed to participate in the interviews, we identified and recruited individuals in a variety of roles (such as Store managers, Supply Chain managers, HFSS transformation managers, Nutrition, Corporate affairs, Category Management, Category buyer (retail), Product Technologists/buyer, Data scientists). Where possible, individuals directly involved with the implementation of the HFSS legislation at the time it came in were recruited. Staff did not have to participate in the retailer survey to be eligible to take part in the interview.

The interview schedule was co-produced in partnership with the wider DIO Food project team. The interviews were semi-structured with questions varying according to job roles. For example, staff in product and nutrition-related roles were asked about product reformulation. The full interview schedule is available at: <https://doi.org/10.17605/OSF.IO/KTSZA>. The research team positionality statement is provided in [Supplementary Information 1](#).

The interviews were conducted online by AK between July 2024–November 2024, using Microsoft Teams, and lasted approximately 47 min (range: 39–91 min). Interviews were video and audio recorded with the interviewee's consent and transcribed verbatim using the automated transcription tool in Microsoft Teams, with manual checks by AK and RAS to ensure accuracy. Transcripts were anonymised and were not returned to participants for comment or correction, nor were interviews repeated. Interviewee details (retailer and exact job title) are not reported in the manuscript to maintain anonymity. There were no incentives for taking part. Participants did not provide feedback on the findings.

## 2.4. Policy recommendations

Findings from the interviews and surveys, and surveys with customers (detailed in full elsewhere (Kininmonth et al., 2025)), were synthesised to produce policy recommendations that were grounded in the evidence. Policy recommendations were produced three co-production workshops which were each 1 h in length and conducted

between 18th December 2024 and 29th January 2025. These workshops involved academic members of the DIO Food research team and representatives from the IGD, as detailed in [Supplementary Table 2](#).

In the first workshop, AK and RAS presented the findings from the surveys and interviews and facilitated discussion of these findings. Attendees discussed these findings to identify initial policy implications. In the subsequent two workshops, these preliminary recommendations were iteratively refined through facilitated discussions. This iterative process was designed to enhance the methodological rigour and practical relevance of the policy recommendations to ensure they were evidence-based and contextually appropriate to support effective food policy development. The retail representatives played no role in the development of the recommendations.

## 2.5. Data analysis

### 2.5.1. Retailer business-level surveys

Data collected were used to gain additional contextual insights into business-level responses to the HFSS legislation. Quantitative data were summarised using descriptive statistics, such as the number and/or percentage of retailers of those surveyed that reported a response, and free-text boxes were summarised narratively to provide further contextual insights.

### 2.5.2. Individual-level interviews

Data were analysed using rapid qualitative analysis (Muir et al., 2023). This approach is important for time-sensitive policy research to allow timely results to be shared with policymakers (Muir et al., 2023; Taylor et al., 2018). Rapid qualitative analysis involves coding data based on predefined themes (which in this case were based on the research questions of this policy driven evaluation) and interpreting findings to draw meaningful insights and has been found to be comparable to more established qualitative approaches such as thematic analysis (DeJonckheere and Vaughn, 2019; Muir et al., 2023).

Summaries of all main points for each a-priori theme were made by AK and RAS after listening back on each interview video file. Summaries were then entered into an overarching Rapid Assessment Sheet (RAP Sheet) detailing the summary points from all participants (Muir et al., 2023; Taylor et al., 2018). Initially, a separate RAP sheet was created for each interviewee that was sectioned into four a-priori themes labelled (a) barriers to implementation of the HFSS legislation, (b) resources required for implementation of the HFSS legislation, (c) approaches used to interpret the HFSS legislation, and (d) approaches used to implement the HFSS legislation. AK and RAS looked across interviewee's RAP sheets and used triangulation and a consensus-based approach to identify duplicate or related data for each a-priori theme. Within this framework, sub-themes were generated inductively from the interview data and iteratively refined through regular meetings between AK and RAS. To improve the presentation and interpretability of the findings, whilst maintaining the original analytical structure, the four a-priori themes were collapsed and refined to produce two overarching themes, and sub-themes were reorganised accordingly. Interim findings were presented to DIO food stakeholders.

## 3. Results

### 3.1. Retailer survey results

Surveys were completed by representatives from the four retailers, Asda, Morrisons, Sainsbury's and Tesco, with one survey completed per retailer. Multiple representatives across the business who were involved in preparing the business for the HFSS legislation implementation contributed to the survey response for that retailer to ensure completeness of responses.

### 3.1.1. Guidance

Three retailers stated the government guidance was insufficient to support implementation. They highlighted that the guidance did not provide sufficient information about the categorisation of products in-scope and out-of-scope. The fourth retailer stated guidance was sufficient but also agreed that product guidance was not sufficiently detailed. The lack of sufficient guidance in this area led the BRC to develop additional product guidance to clarify in-scope and out-of-scope products. The fourth retailer also highlighted unclear aspects of the guidance that were not clarified when queried, such as what areas of the store constituted the “*main customer route*”, which is a term that was referred to in the legislation guidance, but the meaning of this term was not clarified.

### 3.1.2. Reformulation of own-brand products

Three out of the four (75%) retailers reported the legislation changed their reformulation plans, product development, and innovation plans for their own-brand product ranges (Table 1). While the fourth retailer reported their reformulation and product development plans remained unchanged, they stated that HFSS was now a key consideration in future product innovations.

### 3.1.3. Store layout and size changes

Four retailers reported making physical store layout and size changes in response to the legislation (Table 2).

### 3.1.4. Changes to internal systems and processes

All retailers (4/4; 100%) had dedicated teams responsible for their HFSS legislation response. Most were unable to estimate numbers of staff involved, due to the scale of resources needed to achieve compliance at different levels of the business. However, one retailer estimated 230+ colleagues contributed to legislation implementation, with additional external contractors hired for store refits.

### 3.1.5. Compliance and enforcement

All retailers (4/4; 100%) reported receiving guidance or support regarding compliance from the BRC and primary authority, and enforcement from primary authority. Retailers worked with the BRC and enforcement officers pre-, during- and/or post-implementation. Post-implementation, 3/4 retailers (75%) reported receiving enforcement checks to investigate compliance. However, these visits were minimal and ceased after the first few months. None of the retailers (4/4; 100%) received notifications, warnings, or fines in relation to non-compliance.

## 3.2. Interview results

15 stakeholders were interviewed, including 13 individuals from 3 retailers, one BRC representative and one enforcement officer. Retail representatives were from roles such as Nutrition, Store manager, Legal, Commercial Operations, Regulatory affairs, Technical Manager, Trading Standards, and Data. The rapid qualitative analysis of interviews identified two themes and nine sub-themes. Participant codes are not

**Table 1**

Changes made to reformulation, product development and innovation plans across the three retailers (of four) reporting changes in response to the HFSS legislation.

Description of change	Number of retailers. N (%) out of 3 reporting changes
Accelerated reformulation plans	3 (100%)
Accelerated product development and innovation plans	2 (66.6%)
Shifted the focus of plans to different nutrients	3 (100%)
Shifted the focus of plans to different product categories	3 (100%)

**Table 2**

Physical store layout and size changes reported by the four retailers in response to the HFSS legislation.

Store layout changes	Number of retailers. N (%) out of 4 retailers
Relocating HFSS products to unrestricted areas (e.g. mid-aisle displays)	3 (75%)
Moving out-of-scope HFSS products to end of aisle	4 (100%)
Merchandising alcohol in prime locations	4 (100%)
Merchandising baby foods in prime locations	1 (25%)
Merchandising non-food items in prime locations	3 (75%)
Expanding in-store bakery products in prime locations	1 (25%)
Re-fitting store layouts to increase space in-aisles	3 (75%)
Replacing aisle ends with advertising rather than products	2 (50%)
Re-fitting non-sales space to reduce total floor area (to be below 2000 sq. ft.)	1 (25%)

provided alongside quotes due to commercial sensitivities

Theme 1: The importance of effective guidance and realistic timeframes in food policy

Theme 1 reflects that, when asked about their experiences of implementing the HFSS legislation, interviewees consistently reported encountering barriers to implementation prior to the official go-live date. Consequently, participants emphasised the importance of supplementing complex food policy with clear, practical, and timely guidance. In particular, they noted the challenges of enacting a policy developed on a limited evidence base, lacking a holistic, system-wide approach, and produced without meaningful co-production with the sector. Moreover, it was stressed that this guidance is time-sensitive and should be delivered to its implementers within realistic timeframes, and supported by “*two-way conversations*” with the government to gain clarity. In the perceived absence of support, stakeholders highlighted their reliance on alternative sources of guidance (such as from the BRC, enforcement officers, and internal teams) to “*enable*” them to action the legislation. Many interviewees reflected on what had been learnt from the first phase of the HFSS legislation implementation as they prepared for the next phases (i.e., implementation of the HFSS legislation in the devolved nations (Scotland and Wales), and introduction of the volume-based price promotion restrictions which restricts “*volume*” price promotions, such as multi-buy, extra or free offers (50% extra free or 3-for-2) on in-scope HFSS products and advertising restrictions).

Subtheme 1.1: How delays and tight timelines impacted implementation of the HFSS legislation

This subtheme highlights challenges posed by delays in government guidance released in April 2022. Retailers stressed the importance of timely, clear and comprehensive guidance to facilitate effective implementation. Stakeholders drew comparisons with previous change projects in retail, highlighting how late receipt of guidance meant retailers struggled to test implementation of the legislation effectively and at scale:

“*So, lack of time. It was very, very rushed in terms of if you look at similar change projects that have been introduced from a grocery retailer, you normally get significantly more time to start to implement things and test proof of concept*” (P2).

There was a sense of “*frustration*” from stakeholders, as it was considered impractical to wait for the release of official guidance before implementing changes (both online and in-stores). Retailers highlighted relying on their own “*judgements*” of the legislation and on the joined-up interpretation between retailers, BRC, and enforcement officers. Concern was expressed that making changes based on unofficial interpretations risked misinterpreting the legislation and later having to rework decisions when official guidance was released:

*“It was mine [retailer] and [enforcement officers] interpretation which the business was starting to use and we had to sort of hope that we were getting it right” (P5).*

Stakeholders highlighted how any decisions that had to be reworked based on the official guidance had the potential for perceived legal implications. Agreements made with suppliers about the placement of products occur months in advance, meaning agreements made with suppliers ahead of the guidance were subject to change following the delayed release of the guidance:

*“...we have agreed promo plans with suppliers and coming off those promo plans will be a GSCOP [grocery code of practice] issue” (P4).*

Upon reflecting on their experiences of implementing the HFSS legislation, retailers also expressed widespread apprehension regarding the forthcoming volume-based price promotion regulations, which restricts “volume” price promotions, such as multi-buy, extra or free offers (50% extra free or 3-for-2) on in-scope HFSS products. At the time of interview, many noted that they had not yet received confirmation of the regulations’ definite implementation, nor had they been provided with official guidance to support compliance:

*“We still don’t have guidance... we’re getting to 12 months, and I don’t think we’re anywhere near guidance... if we are going to implement something we are gonna need time because it’s very complex” (P9).*

In an attempt to streamline communication for the implementation of the volume-based price promotions regulations, the government has planned to only respond to queries raised by the BRC rather than from individual retailers. The BRC flagged how this approach may present a significant challenge for retailers and manufacturers as it could silence the voice of “small companies who may not have the resources, who are not part of a trade organisation”.

Subtheme 1.2: HFSS legislation was more of a directive than co-production with the retailer sector

Stakeholders discussed raising several ambiguities within the proposed legislation during the consultation phase, many of which were not addressed in the final guidance. Consequently, stakeholders expressed dissatisfaction with the government’s approach to communication pre-implementation and referred to it as “more of a directive than a conversation”. Indeed, due to the complexity of the legislation, retailers expressed difficulties in obtaining clear responses from the government:

*“...but then the communication dried up, and they weren’t responding to questions about it, it was more that they just sort of shut the door” (P9).*

Instead, stakeholders discussed how the BRC coordinated communication with the government on behalf of the retailers by having regular meetings with members of the BRC and the Department of Health:

*“So, we had very active engagement with the Department of Health... and I would pose all the questions that our members had to the Department of Health.” (P7).*

However, despite active communication, the BRC described how there remained unanswered questions about the legislation at the time of interview, (18 months post implementation):

*“There is a lot of questions that still had not been answered. I think they [the government] really underestimated how complicated all of this is” (P7).*

Stakeholders reported experiences of insufficient engagement and consultation with the retail sector during the legislation’s development. Consequentially, many retailers conceived the government did not fully understand the complexities of the retail environment, both online and in-store:

*“If they’d [government] had done more engagement from a national retailer point of view at the grounding and the concept of the legislation, I*

*think then they would have made some significant changes and understood how difficult it was to implement.” (P2).*

Interviewees also believed the HFSS legislation did not align with other existing policies (e.g., the traffic light food labelling system). Consequently, retailers felt that the fundamental aims of the legislation were unintentionally “watered down”. Similarly, both enforcement officers and retailers expressed frustration over the practical challenges posed by the legislation, which they suggested may have been avoided with deeper understanding of retail among legislators. Enforcement officers found the legislation conflicted with well-established criteria making it more complicated to enforce:

*“there was a decision made to go and change the minimum size of store and there was already a well-established and understood size that was generally used for licensing for Sunday trading for everything else and for some reason, the decision was made to make it slightly smaller and it just made things an awful lot more complicated because ... there was an expectation that we would have to go out and physically measure stores...” (P6).*

Interviewees reflected upon the roll out of the HFSS legislation across the devolved nations (Scotland and Wales). They raised concerns that HFSS legislation rules may differ across nations, with Wales and Scotland introducing the HFSS legislation independent from England, and that this divergence creates logistical challenges for their businesses, noting:

*“It’s difficult enough as a retailer to manage one piece of legislation. If you have to manage three in our devolved nations that are all different, it becomes incredibly complicated.” (P5).*

Nevertheless, retailers and the BRC applauded the Welsh government for their willingness to engage with the retail sector and act upon concerns raised about unclear aspects of the legislation in England (i.e., removing reference to the “main customer route”). In addition, the BRC also highlighted how the Welsh government appeared more amenable to incorporating the BRC’s guidance into their official guidance to facilitate implementation in Wales:

*“We’re [BRC] in discussions now with the Welsh Government to see if they can endorse our guidance more as their official and include it as a link on their website, which they seem more amicable to than the English Government does”. (P7).*

Subtheme 1.3: “There was no evidence base” underpinning the HFSS legislation

Despite stakeholders expressing support for the “fundamental aim of the legislation” in addressing obesity, retailers expressed concerns about the potential effectiveness of the legislation (i.e., targeting product placement) and the strength of the evidence underpinning it, especially given the scale of changes required for implementation and compliance:

*“The amount of work it was to physically reorganise stores, hundreds of stores, completely reorganise, move fridges, the complexity for the colleagues to implement the different products. We didn’t feel like there was an evidence base given the scale of the implementation” (P9).*

This was coupled with retailers’ belief that by focussing on larger retailers, the legislation lacked a whole food system approach:

*“If you’re looking holistically as an obesity strategy, why target one area [retailers] substantially without targeting other areas [of the food system]?” (P10).*

Some respondents felt that the legislation was “a sledgehammer to crack a relatively small nut” as it did not address other aspects of the food environment. Furthermore, retailers stated they were disappointed the government did not utilise the retail sector to provide an evidence base through in-store trials before rolling the legislation out in full:

*“We can test and learn things... what we’ve always said right from the beginning is “work with us, what would best achieve the overall objectives and let’s just do some pilots and see what works” (P9).*

Subtheme 1.4: Relying on support from other organisations to aid understanding of the HFSS legislation

Retailers highlighted that the BRC and enforcement officers were integral in aiding interpretation of the legislation:

*“So, they [BRC] were really helpful in terms of getting that collective view from retailers and supporting the department [government] as well to kind of be that funnel”. (P9).*

Retailers also utilised internal teams, including “core HFSS groups” consisting of staff from across the business as the legislation had “crossover tentacles”. These teams were established to aid understanding and implementation of the legislation, with staff members typically taking on these roles in addition to their “day jobs”.

Interviewees noted some product placement restrictions were already being implemented at store level, such as removing confectionery from checkouts, which facilitated implementation of the legislation. The illustrations provided within government guidance were also described as helpful, although some reported these were oversimplistic and overlooked the complexities of retail, particularly for online shopping environments:

*“There was some good guidance given... they had illustrations of different home pages and red areas and all that, which was helpful. But those are probably the more obvious bits... the guidance really considered a very simple website, not a complicated big retailer website.” (P8).*

Theme 2: The HFSS legislation was a force for good, but there were challenges along the way...

Theme 2 reflects how the HFSS legislation was viewed as “a force for good” and an encouraging first step towards shifting customer purchasing behaviour in favour of health, while also highlighting the challenges encountered during its implementation. Retailers described difficulties in accurately classifying products as HFSS or non-HFSS, often having to rely on suppliers to provide the necessary information. Interviewees also discussed the variety of approaches adopted to achieve compliance, noting the positive knock-on effects this had in driving product reformulation and standardising retailers’ use of health metrics. Many retailers emphasised the importance of “knowledge exchange”, describing how conducting trials, sharing lessons learned internally, and benchmarking against competitors were key aspects of the implementation process. However, they also highlighted the significant effort required to train staff across all areas of the business. Finally, stakeholders pointed to a perceived mismatch between the substantial investment made to implement the legislation and the limited level of enforcement that followed.

Subtheme 2.1: Suppliers as a barrier to estimating HFSS due to the lack of universally available nutrition data.

A key challenge for implementation was the lack of access to data required to classify HFSS status of branded products. In the absence of universally available data, retailers had to obtain the necessary product information from suppliers and manufacturers but interviewees reported that these data were often not shared due to concerns over recipe IP:

*“From a branded perspective, we don’t ordinarily hold that data for nutrition and therefore we were unable to, you know, work out HFSS compliance... and normally branded manufacturers feel that that’s their selling point, so, they don’t want to share their recipes with you.” (P12).*

As liability for misclassification fell to the retailer, different approaches were employed to mitigate against suppliers’ not sharing data, including using “judgements” or “guesstimations”, or “defaulting” to classifying products as HFSS when suppliers failed to provide necessary data, thus “erring on the side of caution”. Some retailers suggested that a

“live, centralised product database” would streamline HFSS classification of products.

Alternatively, stakeholders suggested mandatory reporting of product data from suppliers/manufacturers to retailers, or liability for HFSS classification be transferred to the supplier/manufacturer:

*“One of the issues with the legislation is it puts all the onus on retailers [to classify products] and very little on the manufacturer to get the information correct” (P5).*

Subtheme 2.2: Harnessing business insight to implement the right changes in store.

Retailers differed in the extent to which they trialled the legislation implementation. Some led the way:

*“We were chosen along with one other store to be a trial for anything head office said around HFSS, to trial the implementation in a test environment [the store] to see how practical it was in terms of all of the ideas, how easy it was to implement, to try and break it, and then learn from any of the trial periods that we had” (P2).*

Whereas others opted for learning from the trials conducted by other retailers:

*“In the early days, I think [name of retailers] were quite vocal in terms of when they did a trial store. So, I think it [trial findings] was readily available to us [retailer]” (P12).*

Retailers who trialled aspects of the legislation implementation, disseminated learnings internally throughout their business via workshops and meetings, utilising “HFSS champions” in this process. Respondents also highlighted the importance of gaining insights externally from observing how other retailers implemented the legislation.

Subtheme 2.3: Translating the complex HFSS legislation for staff to understand.

Retailers described challenges in translating the complex legislation for retail staff:

*“We have 100,000 colleagues, they’ve all got to engage in the law and the sentiment of the law, and we’ve got different ways of producing the food we sell in store and so to communicate that in a manner that made sense to a colleague on the ground was a challenge” (P14).*

Retailers used several methods to communicate the new rules under the legislation, which included “staff training”, creation of “visual diagrams”, “internal newsletters”, “planograms”, “HFSS flags” and developing “systems to automate HFSS processes”.

However, due to conflicting elements of the legislation, retailers were met with incidences of confusion and resistance from staff members. For example, doughnuts from external suppliers could not be placed in prominent locations, but if they were loose or packaged in-store for direct sale then they could. This was exemplified by one retailer:

*“Trying to explain to a store manager why he could put a pork pie ..... Why that was OK on the end of an aisle, but he couldn’t put something else which he thought was healthy on there was hard.” (P8).*

Throughout the interviews, participants reflected on the impact that implementing the legislation had on staff morale and burn out, given the sheer scale of the implementation:

*“Someone took early retirement [because of the legislation]. She was just like, ‘you know what, I can retire at any given point, I’m done, it’s not worth it’”. (P11).*

In addition, respondents indicated that the HFSS legislation had caused internal friction between category teams who were inherently profit driven, compared to nutrition and legal teams who were inherently health and legislation driven. It was also suggested that implementation of the legislation, with its complexity, scale, and apparent contradictions, had undermined the internal health strategies of some

retailers, with nutrition teams now being viewed “as a joke” by others within the business, delegitimising the department’s efforts:

*“The whole thing [legislation] has sort of sent our strategy backwards a little bit and we’re now having to work hard to build that back up and do lots more engagement with the business for them to understand why it’s so important” (P3).*

Subtheme 2.4: Differing retail strategies used to move from in-scope to out of scope.

Stakeholders detailed the range of changes that were implemented in store to enact the legislation, ranging from “whole store refits” to “moving products to different locations” (i.e., off aisle ends). Retailers also recalled novel approaches used to promote in-scope HFSS products without violating the legislation, including using “digital advertising”, “creating islands or bays”, “extending the length of aisles” and “shortening the end of aisle”, and the “creation of mid-aisle displays”. For example, one retailer spoke of the introduction of electronic screens which allowed for the digital advertisement of HFSS products:

*“You then got electronic screens or then you got slimed lengths [referring to aisle end], which were then HFSS compliant but really, really thin and held very little stock but was more of a mission-based plinth with lots of advertising” (P2).*

Consequently, retailers spoke of the perceived competitive disadvantage resulting from differences in how retailers interpreted the “letter of the law verses the spirit of the law”, with one retailer stating:

*“You could drive a coach and horses through some of the legislation. We were keen for a level playing field but some of our competitors haven’t necessarily interpreted things as cleanly as we might have, so we do feel it’s causing competitive disadvantage now because others aren’t, so that’s frustrating” (P10).*

Compliance was also achieved through product reformulation. For certain categories, such as confectionary, retailers spoke of the challenges of reformulation without fundamentally changing the essence of the product.

*“There are significant issues in areas where it’s either governed by legislation, like chocolate, or where you just cannot get a product that’s the quality of the product that you accept of a biscuit or a cake” (P12).*

When flagship products could not be reformulated, retailers discussed how brands developed new versions of the product to be in-scope and therefore eligible promotion in prime locations, while still keeping the in-scope product in circulation:

*“I think Haribo launched a few different things that essentially instead of reformulating bags of Starmix, they just created new sweets that were starmix adjacent that were not restricted” (P11).*

Moreover, retailers highlighted how products reformulated to be in-scope based on the NPM score may still not align with existing traffic light classifications of healthiness. One retailer highlighted the health conundrum surrounding reformulated Coco Pops:

*“There were things like Coco pops that they made compliant, so as a customer they’re thinking ‘Oh coco pops are healthy’ and it’s like, ‘well, no, it’s not something we’d promote, if you’re looking at holistic health, because it came down to the NPM score” (P11).*

Nevertheless, stakeholders highlighted how the implementation of the HFSS legislation had led to the standardised use of the NPM model across all retailers rather than retailer-own internal health metrics. Moreover, HFSS was perceived to have become “part of the conversation”, being considered in existing reformulation plans, accelerating future reformulation plans, and built into future business decisions:

*“So now there’s so many restrictions if your product is HFSS in terms of placement, promotion, coming up to advertising, etcetera, that it has really created much more of a framework internally. The legislation has*

*had an impact in terms of internal functioning of systems and being much, much more at the forefront of a business consideration.” (P7).*

Subtheme 2.5: A high level of investment in changing stores followed by limited enforcement.

Respondents recalled enforcement of the legislation had been minimal and only occurred immediately following the legislation implementation date:

*“As an organisation, we expected it to be like the hot potato from an enforcement contact point of view. So when the go live date happened, when we were all on tenterhooks in terms of if we’re all gonna get checked, very little of us actually did. So, I thought it felt a little like we’ve launched it, but then no one has actually come and checked the implementation, which then sort of felt a little bit strange.” (P2).*

Respondents discussed how during enforcement visits there was a distinct “lack of knowledge” about what enforcement officers were enforcing and how they would do this “without access” to the necessary product data to calculate NPM scores. Enforcement officers expressed that the limited enforcement was attributable to underfunding, competing priorities, and challenges with access to information that made enforcement at scale difficult:

*“You know, one of the issues that that we had at the beginning was all about how do you get that information? Because you can’t just sit back and go, OK, this is the nutritional information panel on the product, we can work out that it’s going to be, have a value of XY or Z. It doesn’t work like that... How do you get that information? Where do you get it?” (P6).*

Retailers expressed widespread frustration about the lack of enforcement along with the small budget allocated for enforcement:

*“Retailers have gone and spent millions of pounds here, you know, it’s not a game, it’s millions of pounds to deliver this, and then it’s something like £200 per region on enforcement?! It’s a bit of a joke really.” (P1).*

Many respondents reported that competitors resorted to policing one another by “visiting competitor stores to assess their compliance”. Additionally, non-governmental organizations like The Grocer took on the role of enforcers by visiting stores and publicly reporting on retailers’ compliance. The BRC raised concerns about this unofficial enforcement, noting these organisations were highlighting issues they believed were “morally wrong” rather than actual violations of the legislation:

*“There was a period where The Grocer ran a bit of a campaign going out and checking and it was really annoying. They [referring to The Grocer] were like, ‘Well the pick & mix are in the wrong section of the store’ and it was ‘No, they are loose, so it’s just not in scope’ and they were like, well, this is outrageous... I kept going back like, look, you keep on highlighting these as a noncompliance, which you might think morally is not the right thing to do, but take it up with the government because we are compliant” (P7).*

### 3.3. Recommendations

Seven key recommendations (Table 3) for future policy implementations were developed via co-production workshops (n = 3) based on findings from the survey and interview data, as well as findings from customer surveys conducted as part of this project (results detailed elsewhere (Kininmonth et al., 2025)).

## 4. Discussion

This novel mixed-methods study is the first to examine the implementation of the HFSS legislation in England, providing real-world insights into how four major UK retailers interpreted and implemented the HFSS legislation. Drawing on data from surveys with representatives from four major UK retailers (~65% grocery market share), and

**Table 3**  
Seven recommendations for future policy implementation co-produced via stakeholder workshops.

Recommendation	Explanation
1 – Evidence-based public health legislation	Our findings underscore the need for a strong evidence base to support legislation. Consistency in quality, quantity, type and source of evidence is required to inform legislation and sufficient funding to allow evidence generation and robust and timely policy evaluation is required. Evaluation insights could be used to iteratively refine and enhance legislation. Furthermore, non-academic sources such as in-store trials, which have been independently evaluated, could be considered and a dedicated forum be established to facilitate sharing retail findings.
2 – Co-production of future food policy implementation with organisations across the food sector, enforcement and academics.	Our research highlights the need for context-specific experts to contribute to implementation guidance for food policy in complex retail environments. Policymakers should establish effective communication strategies to engage key stakeholders (to include academia, retail, trade associations, enforcement) early and openly throughout the process. Working with trade associations or non-profit organisations to gain unified input from the food sector limits potential conflicts and competitive advantage.
3 – Establish an open, regularly updated food composition database that includes branded and generic items	There is a critical need for an open, regularly updated food composition database to support consistent implementation, compliance, enforcement and timely evaluation of the legislation (see <a href="#">Supplementary Fig. 1</a> ). Suppliers and manufacturers should be mandated to provide ingredient data to enable NPM score calculation, with tiered access based on user requirements (e.g. enforcement would only require the NPM score and HFSS status, whereas retailers and researchers require full data access). This would facilitate effective implementation, enforcement and evaluation of existing and future legislation.
4 – Legislation must be enforceable which requires sufficient support	Our findings evidence the need for adequate funding, training, data access, an interactive HFSS mobile-tool for in-store use, and a dedicated public forum for enforcement queries. Policymakers could take insights from successfully enforced legislation such as in environmental health, where support, training, and funding were critical.
5 – Align government departments in their approach to food.	Insights from our research highlight a need for a joined-up approach between the 16 government departments, identified in the National Food Strategy, that deal with food-related issues ( <a href="#">Dimbleby, 2020</a> ). To facilitate this, government should pursue the use of a Food Mission Lead or draw upon learnings from other successfully implemented legislations, such as for tobacco or alcohol legislation.
6 – Dedicated support and guidance to facilitate effective implementation and enforcement	Our findings highlight the need for formal support mechanism pre-implementation, including a dedicated department for queries and a public forum to publish responses to queries in a timely manner. Support could include a decision document with evidence and rationale, explainer videos for differing store layouts, and FAQs.
7 – Ensure healthy foods are more affordable and accessible.	Existing legislation left it to retailers' discretion to decide the alternative products to promote in prominent locations, which led to a range of strategies being implemented and unintended consequences that may not always align with public health objectives. Future legislation should go further, by not only restricting placement and promotion of less healthy foods but by increasing the affordability and accessibility of healthier foods through incentivisation and promotion in prominent locations. This is particularly important to support healthier purchases among lower-income households ( <a href="#">Kininmonth et al., 2025</a> ).

interviews with representatives from three major UK retailers (~39% grocery market share), the BRC, and an enforcement officer, this study revealed the barriers to implementation, the resources required for implementation, and the range of interpretations and strategies adopted across the UK retail sector in response to the HFSS legislation. Our findings revealed widespread support for the fundamental aim of the legislation to reduce obesity, but suggested there were significant barriers to effective implementation. These included tight deadlines, delayed and ambiguous guidance, limited two-way communication with government bodies, and the absence of universally available product data to classify the HFSS status of products. Retailers reported adopting a variety of strategies that were compliant with the legislation, but that could be seen as exploiting weaknesses in the legislation's design to continue to promote unhealthy foods. For example, retailers reported moving out-of-scope HFSS products to aisle-ends and using digital advertisements to promote in-scope HFSS products. Furthermore, a distinct lack of enforcement post-implementation was noted, with enforcement officers lacking resources, knowledge, and funding to carry this out. Drawing on these findings, a series of co-production workshops were held between academic experts and the IGD, through which seven policy recommendations were developed to support the development of evidence-based, contextually appropriate food policy.

Previous literature examining the perceived impact of the HFSS legislation prior to its implementation revealed that stakeholders (i.e., businesses, enforcement officials, and health organisations) described the legislation as a “good first step” but expressed concerns it would be insufficient to address obesity and poor diet without other initiatives ([Muir et al., 2023](#)). Our findings mirror and extend these concerns, with respondents highlighting the legislation only addressed a narrow component of the food system – namely supermarket product promotion – and questioned whether it could achieve its overarching aim, to

reduce obesity ([Department of Health and Social Care, 2021](#)). This scepticism is not unique to the HFSS legislation; similar concerns have been raised in response to previous food policies, such as the UK soft drinks industry levy, which were perceived as addressing only isolated components of a complex food system ([Carters-White et al., 2021](#); [Petticrew et al., 2017](#)). Despite this scrutiny, the UK soft drinks industry levy was shown to be effective in reducing household purchasing of sugar from soft drinks ([Jawad et al., 2023](#)). Nevertheless, there is growing evidence that complex public health problems, such as obesity, require a whole-systems approach that intervenes at multiple levels to enact change ([Bagnall et al., 2019](#); [Butland et al., 2007](#); [Carey et al., 2015](#)) and although the HFSS legislation represents progress towards creating healthier food environments, further mandatory legislation and reporting across the food system will undoubtedly be needed to reduce obesity and dietary inequalities ([Department for Environment, 2024](#)).

Our findings revealed strong support for the legislation's overarching aim, but concerns were raised regarding the limited evidence base behind the legislation. Typically, less healthy products are disproportionately promoted in retail environments through product placement and price promotion strategies (Food [Foundation, 2025](#); [Glanz et al., 2012](#); [Shaw et al., 2022](#)), with the food industry investing heavily in marketing strategies to increase sales of these products ([Department of Health and Social Care, 2021](#); [Houlton, 2022](#)). Despite this, there is only weak evidence to suggest placement strategies are effective in improving dietary and BMI outcomes ([Shaw et al., 2022](#)), with pre-implementation evidence focusing on increasing the prominence of healthy food rather than restricting less healthy foods ([Shaw et al., 2022](#)). Stakeholders in the current study called for a test-and-learn approach, leveraging the retail sector to build an evidence base to ensure legislation supports healthier consumer choice. This is something which is increasingly forming part of retail business strategies, with research suggesting that

retailers perceive promoting customer health as an 'ethical obligation' (Stone et al., 2024). Retailers have previously voluntarily trialled in-store and online changes to encourage customers to make healthier food choices, and these have been independently evaluated through industry-academic partnerships (University of Leeds, 2021). For example, the Healthy Start top-up scheme to increase purchases of fruits and vegetables in low-income households (Thomas et al., 2023). However, it is important to acknowledge that this test-and-learn approaches used by retail in response to the legislation may have been used to explore how to minimise profit loss incurred from adhering to the restrictions. Furthermore, although in-store trials are an important mechanism for real-world evidence generation, it is critical that their evaluation is conducted independently by academic researchers, without commercial influence, to ensure objectivity and credibility.

Co-production is increasingly being recognised as a critical approach for encouraging the sharing of knowledge and expertise (Co-Production Collective, 2021). In food systems research, this concept is receiving growing attention (Chambers et al., 2021) as it allows for 'context relevant' solutions (Vargas et al., 2023) that overcome barriers to successful interventions. Our findings indicate that the perceived limited co-production between the retail sector and the government created challenges for policy implementation. Although the government sought stakeholder insight via a consultation process, receiving responses from 690 individuals, 42 businesses (i.e., retailers, manufacturers), and 75 organisations (i.e. charities, public health bodies) (Department of Health and Social Care, 2021), stakeholders in our study felt the concerns they had raised during the consultation process about potentially confusing aspects of the legislation were not fully addressed in the final guidance. Evidence from previous interventions promoting healthier choices in supermarkets revealed co-production with consumers, retailers, and academics led to positive outcomes (Brimblecombe et al., 2020; Jernigan et al., 2019; Vargas et al., 2022). Therefore, greater co-production could have identified and addressed barriers during the HFSS legislation's development phase. However, it is important to recognise that greater co-production does not always lead to positive outcomes, as illustrated by the Supreme Nudge Project (Stuber et al., 2024). There is also widespread concern about the influence of the food industry in co-development of obesity policy (House of Lords - Food, 2024). Whilst there may be a need to engage with the food industry to ensure regulations are applicable, this must occur only once policy has been decided on and in the context of full transparency (House of Lords - Food, 2024). To achieve meaningful co-production with multiple diverse stakeholders, it may be appropriate to seek early input from independent retail sector representatives, such as trade associations, to ensure that policy is feasible whilst mitigating against any bias from retail sector involvement. Furthermore, it is important that researchers and public health advocates hold the government and food companies accountable during the consultation phase to counter the influence of harmful actors within the food industry that can dilute policy (Cullerton et al., 2016, 2020; Ralston et al., 2021; Sacks et al., 2018). Utilising frameworks, such as the Food Research Risk (FoRK) guidance and toolkit, may help support researchers in assessing the risks associated with engaging with food industry and help them to make informed decisions about whether, when, and how to involve the food sector (Cullerton et al., 2024).

In line with concerns raised through consultation prior to the legislation's implementation (Jenneson and Morris, 2021), our findings revealed that applying NPM scores to classify HFSS status across the whole retailer product portfolio (often tens of thousands of products) was a major challenge during implementation. Classifying the HFSS status of products requires comprehensive nutrition composition information, including fibre, fruit, vegetable and nut content, which are not legally required on packaging (Jenneson and Morris, 2021). Consequently, stakeholders highlighted how obtaining this information for classification purposes was a challenge, particularly for branded products, as manufacturers often did not share this data due to concerns over recipe Intellectual Property. The lack of universally available product

data also caused difficulties for enforcement as it was not possible to assess retailer compliance without access to this information. Our findings, alongside previous research (Jenneson et al., 2020; Jenneson and Morris, 2021; Muir et al., 2023), illustrate the need for universally available product nutrition data that would enable both compliance and enforcement of the legislation at scale.

In this study, stakeholders expressed concern that the legislation's approach to classifying products did not adequately align with existing UK nutrition policies, such as the traffic light system front-of-pack nutrition labelling (Nohlen et al., 2022), which has been shown to support healthier food choices (Scarborough et al., 2015; van Herpen and van Trijp, 2011). A recent study of UK supermarkets found that many out-of-scope products displayed in prime locations contained high levels of saturated fat, salt or sugar and were less likely to display front-of-pack nutrition labels compared with non-HFSS products, making it more difficult for shoppers to make informed decisions about the healthiness of these products (Hurst et al., 2025). As such, greater alignment between future food legislation and public health nutrition policies is needed as this would ensure consistency and help shoppers make more informed decisions.

Prior to the legislation, businesses' categorisation of food products did not align with legislative categories and the NPM was only applied on a case-by-case basis for products advertised to children (Jenneson and Morris, 2021). When reflecting on the implementation of the legislation, one benefit identified by stakeholders in the current study was the greater standardisation across retailers in using HFSS as a key health metric. The legislation has resulted in the application of the NPM across whole product portfolios, which in turn may support greater harmonisation of health data across retailers. Additionally, our survey and interview findings revealed that retailers made significant changes to internal operations, including establishing dedicated HFSS teams to coordinate compliance efforts, changes to infrastructure and operations, changes to store layouts, promotional practices, and technical system changes. These changes played a key role in implementing the legislation at scale and reflected the significant organisational investment required for implementation. Conversely, our findings revealed negative by-products of the legislation for retailers, such as an overreliance on core HFSS teams to interpret and disseminate the legislation throughout businesses which led to emotional exhaustion and burnout among some staff, similar to impacts observed in other large-scale organisational change projects (Day et al., 2017). Additionally, our research revealed cynicism among respondents towards future health strategies, shaped by their experiences with the HFSS legislation. This highlights the importance of developing a critical mass to support sustained change at scale (Jenneson et al., 2025).

Our findings reinforce and extend existing concerns about the HFSS legislation's complexity, ambiguity, and limited scope. Retail representatives in our study highlighted the lack of a "level playing field" as a result of the legislation's equivocalty and referred to the "*letter of the law vs the spirit of the law*". Retailers highlighted that working to the "spirit of the law" (aligning with the legislation's intended public health goals) could lead to competitive disadvantage if other retailers worked to the "letter of the law" and exploited loopholes to promote less healthy products. Our findings revealed that retailers used a variety of strategies to achieve compliance, including moving in-scope HFSS products to unrestricted areas (e.g. in-aisle displays), replacing in-scope HFSS products with other less healthy out-of-scope products, such as alcohol or bakery items, and using digital advertisements to promote in-scope HFSS products (Department of Health and Social Care, 2023). Indeed, our findings are corroborated by evidence from a recent study which reported 55% of out-of-scope products promoted in prime locations across three UK supermarkets were HFSS (Hurst et al., 2025) – an example of the letter of the law but not the spirit. A critical downside of the legislation was the failure to specify what alternative products should be merchandised in prime locations, such as healthier alternative products. As highlighted by Stone et al. (2024) and Middel et al. (2019),

healthier foods are less profitable than less healthy foods, meaning retailers are less likely to promote them in prime locations (or restrict less healthy foods), unless legislation mandates it. Although the government consultation process aimed to create a 'level playing field' (Department of Health and Social Care, 2021), our findings suggest that leaving this key component open to interpretation allowed retailers to choose alternative products to promote in prime locations. In some cases, their choices undermined the spirit of the legislation and instead showcased innovative ways used to exploit loopholes to minimise legislation impacts while remaining compliant. In light of this, we recommend that the HFSS legislation should not only restrict the placement and promotion of HFSS products, but also mandate the promotion of healthier alternatives in their place to ensure practices do not compromise public health aims.

Despite the significant resource and investment from retailers to implement the legislation, findings from both our interviews and surveys revealed a lack of enforcement, with retailers reporting few visits from enforcement officers and only during the initial months' post-implementation. A recent study in three UK supermarkets, revealed approximately 17% of products found in prohibited locations were in-scope HFSS products, illustrating how limited enforcement may be enabling continued non-compliance (Hurst et al., 2025). Failing to hold retailers accountable for non-compliance could lead to disengagement and further falls in compliance from retailers, undermining the effectiveness of the legislation. In line with previous research, our findings revealed a number of factors that may have limited primary authorities' ability to enforce the legislation, such as inadequate government funding and not having access to the data required to effectively undertake enforcement checks (i.e., product nutrition data or store size information to assess store eligibility) (Dhuria et al., 2024). In order to effectively conduct enforcement, appropriate resources (both financial support, time, and training) are necessary (Goffe et al., 2018). However, data released by the Grocer indicated that the government provided less than £35,000 a year in financial support to over 300 local authorities to support enforcement of the legislation, which equated to ~£250 per authority per year (The Grocer, 2023). Furthermore, previous research conducted pre-implementation highlighted that limited budget and an over-stretched workforce meant local authorities had very limited capacity to enforce the HFSS legislation (Dhuria et al., 2024; Muir et al., 2023). Our findings support and extend these findings, highlighting the need to provide local authorities with the capacity, knowledge, and funding to enforce the HFSS legislation at scale. This is particularly important ahead of next phase of the legislation in England and legislation's introduction in the devolved nations.

#### 4.1. Strengths and limitations of this study

This study is the first pre-registered, comprehensive investigation using both survey and interview data to explore the interpretation and implementation of the HFSS legislation in England. We captured views from a range of stakeholders from major UK retailers across different levels of the business, from the shop floor to business operations, along with the BRC, and primary authority enforcement. The findings and specifically the co-produced recommendations, provide timely insights for policymakers, businesses and enforcement officers about the implementation of the HFSS legislation.

The views of the 15 stakeholders interviewed for this study may not be representative of everyone involved with the implementation of the legislation. However, we sought to mitigate this by allowing a broader range of retailer representatives to contribute to the survey responses that accompanied the interviews. Additionally, as our aim was to evaluate the implementation of the legislation, which fell to retailers, we did not capture the views of other stakeholders, such as policymakers, manufacturers, or customers (Kininmonth et al., 2025). Another limitation to note is that our research included retailers from traditional supermarkets, not discounters. Discounters may have approached legislation implementation differently (i.e., different product ranges and

store layouts) to traditional supermarkets and therefore our findings may not be generalisable.

## 5. Conclusions

The HFSS legislation marks a substantial shift in the UK government's approach to addressing obesity by enforcing changes to the retail food environment. This research found that stakeholders viewed the legislation as a force for good, but highlighted challenges in implementation and enforcement, namely the need for clearer, timely guidance, adequate support and access to data, and more co-production to ensure the legislation is effective and contextually appropriate. Considering our findings, seven co-produced policy recommendations were developed to support the future development and implementation of effective food policy. These policy recommendations emphasise the need for (1) robust evidence to inform legislation; (2) transparent co-production between policymakers and contextual experts; (3) an open, regularly updated food composition database; (4) adequate resource for enforcers; (5) alignment between government departments in their approach to food policy; (6) dedicated department and forum to support implementation and enforcement; (7) measures that make healthier foods more accessible and affordable. The findings of this mixed-methods research provide a nuanced understanding of the implementation of the HFSS legislation and through the development of seven evidence-based recommendations, we provide practical guidance for future food policy ahead of phase two of the legislation and its implementation in devolved nations.

### CRedit authorship contribution statement

**Alice R. Kininmonth:** Writing – review & editing, Writing – original draft, Visualization, Validation, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Rebecca A. Stone:** Writing – review & editing, Writing – original draft, Formal analysis. **Victoria Jenneson:** Writing – review & editing, Funding acquisition, Conceptualization. **Emily Ennis:** Conceptualization. **Robyn Naisbitt:** Writing – review & editing. **Alexandra M. Johnstone:** Writing – review & editing, Funding acquisition. **Michelle A. Morris:** Writing – review & editing, Methodology, Funding acquisition, Conceptualization. **Alison Fildes:** Writing – review & editing, Project administration, Methodology, Investigation, Funding acquisition, Conceptualization.

### Declaration of competing interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: All authors declare that they work in collaboration with UK retailers; the authors have not received funding from the retailers for their research, including this study.

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## Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.foodpol.2026.103048>.

## Data availability

The data that support the findings of this study are not openly available due to reasons of sensitivity and are available from the corresponding author upon reasonable request.

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