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Industry views of the UK Soft Drinks Industry Levy: a thematic analysis of elite interviews with food and drink industry professionals, 2018-20

Journal:	<i>BMJ Open</i>
Manuscript ID	bmjopen-2023-072223
Article Type:	Original research
Date Submitted by the Author:	01-Feb-2023
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Keywords:	Health policy < HEALTH SERVICES ADMINISTRATION & MANAGEMENT, Public health < INFECTIOUS DISEASES, QUALITATIVE RESEARCH

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3 **Industry views of the UK Soft Drinks Industry Levy: a thematic analysis of elite interviews**
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7 **with food and drink industry professionals, 2018-20**
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26 **Keywords:** Soft drinks, Soft drinks industry levy, Food and drink industry, sugar sweetened
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29 beverage
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36 **Word count:** 6799 (without quotes 5192, with reflexivity section in supplementary file 4915)
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43 Abstract

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45
46 **Background:** The UK Soft Drinks Industry Levy (SDIL), implemented in 2018, has been
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49 successful in reducing the sugar content, and purchasing, of soft drinks, with limited financial
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52 impact on industry. Understanding the views of food and drink industry professionals
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55 involved in reacting to the SDIL is important for policymaking. However, their perceptions
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58 of the challenges of implementation and strategic responses are unknown.
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4 ***Aim:*** To explore how senior food and drink industry professionals viewed the SDIL.
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7 ***Methods:*** We undertook a qualitative descriptive study using elite interviews with 14 senior
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10 professionals working in the food and drink industry. Braun and Clarke’s approach to
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13 thematic analysis was used to analyse the data, taking an inductive exploratory and
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16
17 descriptive approach not informed by prior theory or frameworks.
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19

20 ***Results:*** Five main themes were identified: *(1) A level playing field...for some*, Industry
21
22
23 accepted the SDIL as an attempt to create a level playing field but due to the exclusion of
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26
27 milk-based drinks, this was viewed as inadequate. *(2) Complex to implement, but no lasting*
28
29
30 *negatives*, The SDIL was complex, expensive and time consuming to implement, with
31
32
33 industry responses dependent on leadership buy-in. *“(3) Why us? – the SDIL unfairly targets*
34
35
36 *the drinks industry”*; soft drinks are an unfair target when other categories also contain high
37
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39
40 sugar. *“(4) The consumer is king”*; Consumers were a key focus of the industry response to
41
42
43 this policy. *“(5) The future of the SDIL”*; There appeared to be a wider ripple effect, which
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45
46
47 primed industry to prepare for future regulation in support of health and environmental
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51 sustainability.
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4 **Conclusions:** Insights from senior food and drink industry professionals illustrate how sugar
5
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7 sweetened beverage taxes might be successfully implemented and improve understanding of
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10 industry responses to taxes and other food and drink policies.
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20 **Strengths and Limitations**

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23 • This qualitative study explored how senior food and drink industry professionals
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27 viewed the SDIL.
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- 30
31 • We undertook elite interviews with 14 professionals working in the food and drink
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34 industry, who have often been difficult to recruit in other studies.
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- 37
38 • Braun and Clarke's thematic analysis taking a descriptive approach was used to
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40
41 analyse the data.
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- 44
45 • Elite interviewing methods allow for the building of relationships to elicit meaningful
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47
48 responses from participants.
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- 50
51 • Due to recruitment challenges, interviews were carried out over a long period of time,
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54 meaning participants experienced different political contexts when data was collected.
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For peer review only

Introduction

Diet-related non-communicable diseases are a major and growing problem, responsible for over 11 million deaths globally each year [1]. Sugar consumption is of particular concern, with the World Health Organization (WHO) recommending member states introduce sugar-sweetened beverage (SSB) taxes (World Health Organization, 2017). The Soft Drinks Industry Levy (SDIL), announced on 16th March 2016 and implemented in the United Kingdom (UK) on 6th April 2018, was designed to incentivise manufacturers of SSBs to reformulate their products [3] via charging a levy on soft drinks produced by companies when they leave the warehouse or when imported into the country [4]. Part of the UK Government's Childhood Obesity: A Plan For Action [5], the SDIL consists of two tiers (for particulars of the tax see box 1). The Government published a second chapter of its childhood obesity plan in 2018, which suggested the SDIL may be extended to milk-based drinks, though this has not yet occurred (Department of Health and Social Care, 2018).

Box 1: Soft Drinks Industry Levy Particulars [3]

Eligible drinks:

- ≥ 8 g total sugar per 100 mL charged at 24 pence per litre

- ≥ 5 g and < 8 g total sugar per 100 mL charged at 18 pence per litre

Exemptions:

- Drinks containing more than 75% milk or 1.2% alcohol
- Alcohol replacement drinks
- Powdered drinks
- 100% fruit juices

Manufacturers selling under one million litres of drinks per year

The SDIL was one of the first SSB fiscal interventions explicitly designed to incentivise reformulation [3,6]. This aim was largely achieved, substantially reducing overall SSB sugar content, and inducing a major shift of drinks from the higher levy tier to the lower tier and untaxed bracket between 2016 and 2018 (Scarborough et al., 2020). This shift was reflected in purchases of sugar from SSBs, with a 2.7% or 8g reduction in sugar purchased per household per week in soft drinks one year after implementation [7]. Prior to implementation of the SDIL, the food and drinks industry (hereafter referred to as ‘industry’) viewed the SDIL as having a potentially negative impact on profits resulting in job losses [8–10]. A negative stock market reaction to the SDIL announcement was observed, but this only lasted

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3 two days [11]. Similarly, a negative impact on company domestic turnover was observed
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6 following the announcement of the SDIL, but this resolved by the time of its implementation
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17 Previous work has investigated industry perspectives of the SDIL expressed through
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19 the news media [8,13–16] and the views of industry, civil society and academic participants
20
21 on how marketing changed in response to the SDIL [17]. A notable gap in the literature,
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23 however, is perspectives of the SDIL from the commercial sector, not communicated publicly
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25 through news media nor focused solely on marketing responses. Important learning can be
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27 obtained by exploring the perspectives of commercial actors involved in responding to
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29 regulation. Interviews with senior members of industry can help examine the impact of the
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31 SDIL on both the soft drinks industry and wider food and drink industry, an avenue not
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33 previously explored. This study therefore aimed to address these knowledge gaps and inform
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35 policymaking by exploring the perspectives of senior industry professionals regarding the UK
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50 SDIL.
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57 **Methods**

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Study Design

This study adopted a qualitative descriptive design involving elite interviews with senior industry professionals.

Methodological Orientation

This research took an experiential qualitative approach, within a critical realist position. Participant perspectives and perceptions were prized over researcher interpretations, and reality was derived from our participants' words and meaning, rather than a reality constructed through researchers' interpretation of their words [18]. A descriptive approach was used to explore how the SDIL was viewed from the position of our participants.

Research Team

ANONYMISED AUTHORS secured funding for the overall evaluation of the SDIL within which this study formed a part [19]. Interviews were conducted by Postdoctoral Research Associates ANONYMISED AUTHORS. AUTHOR led the design of data collection and AUTHOR led the design of the analysis. AUTHOR & AUTHOR provided guidance on the design of both elements. AUTHOR and AUTHOR recruited and interviewed participants.

1
2
3 AUTHOR led the analysis with support from AUTHOR. AUTHOR conducted secondary
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6
7 coding to support theme generation and interpretation. All authors previously mentioned, as
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10 well as AUTHOR and AUTHOR were involved in data analysis and interpretation, as well as
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14 drafting this manuscript.
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20 *Reflexivity*

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23 Braun and Clarke discuss reflexivity as a fundamental characteristic of thematic analysis,
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26 involving critical reflection of researcher perspectives, and how these will be integrated
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29 within the analysis and interpretation of data [20]. The complete elimination of bias is not
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32 something that can be conducted in qualitative research and more importantly should not be
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35 an aim. Unlike statistical analysis, the researcher is the tool of analysis. The researcher
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38 therefore is an integral part of the analytic process and to conduct qualitative thematic
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41 analysis well, they must develop an understanding of how their own perspectives, position
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44 and view of reality helps illuminate will influence the analysis [20].
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54 This study aimed to centre participants' words in a descriptive manner to preserve their
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57 intention. This approach was also chosen due to reflection by the research team on our
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4 positionality as public health academics. We aimed to understand industry perspectives
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7 regarding the SDIL; however, it is important to acknowledge that the personal and
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10 professional goals of the research team (authors on this paper) as public health researchers
11
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13 are likely to be different from those of people working in the food and drink industry.
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16 Therefore, a descriptive approach was selected which prizes participants' words and
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19 perspectives over and above researcher interpretations. Whilst our perspectives have still
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22 influenced the analysis, as they should in good qualitative practice, we sought to put aside our
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25 biases and negativity towards some of the practices of the food and drink industry, to truly
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28 'listen' to the perspectives of our participants. As a result, a modified version of Braun and
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31 Clarke's thematic analysis was used; reflexivity was a priority throughout the analysis in line
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34 with the approach.
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44 It is also important to note that, although we have taken a descriptive approach, the results
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47 represent participant perspectives. Whilst the researchers work to put aside their biases which
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50 may lean towards the critical; statements, findings and themes found do not represent an
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53 objective truth, rather the reported perspectives of participants. We urge readers of this work
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57 to use their own critical reflection when interpreting and using these findings.
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Participants

Senior professionals from the soft drinks, food and other drinks industries were recruited to this study using purposive and snowball sampling. We adopted 'elite interviewing' methods to maximise involvement of senior professionals in positions of influence within their organisation and with high levels of responsibility [21]. This technique provides a series of strategies to support recruitment of difficult to access key participants, and to ensure the validity and reliability of data [22]. The principles of elite interviewing were used to inform recruitment including the maintenance of trust, gauging the tone of the interview, preparing appropriately for the interview, and engaging in dialogue relevant to each informant [23,24].

Individuals were considered eligible to participate based on the following criteria: a) currently or previously held a high-level industry position (at the managerial, director or chief officer level), b) their organisation and their professional role was directly or indirectly impacted by the SDIL and c) they could provide a novel perspective, not previously heard in our interviews, to ensure a range of views. Recruitment typically involved an email introduction by a member of the team or informant contact, although AUTHOR also attended

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3 industry food events and recruited face to face. Initial contact was followed by an informal
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7 telephone conversation with AUTHOR or AUTHOR to discuss the research purpose, team
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10 and informant interests and perspectives, ultimately proceeding to full participation via
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13 telephone interview.
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20 *Data Collection*

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23 Telephone interviews were conducted from June 2018 to June 2020. Participant information
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26 sheets were sent to potential participants prior to participating in the informal discussion.
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30 Informed consent was obtained verbally prior to commencement of the formal telephone
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33 interview, which was digitally audio-recorded. Interviews were undertaken using a minimally
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36 structured topic guide containing three broad areas of inquiry: a) Can you tell me about your
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39 role and organization? b) Can you tell me about your sector as a whole? c) What do you
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43 know about the UK Soft Drinks Industry Levy and its impacts? Elite interviewing
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46 necessitates informed and adaptive dialogue [23,25], meaning participants could engage in
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49 ways most relevant to their specific expertise or experiences within these broad areas.
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54 Interviews were transcribed verbatim by a trusted external company, and transcripts were
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4 checked against the audio files by AUTHOR to identify any inaccuracies. Transcripts were
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7 anonymised prior to analysis by removing names of people, organisations, and brands.
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13 *Analysis*

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17 Analysis commenced once all interviews had been conducted and transcribed. Braun and
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20 Clarke's thematic analysis was used, taking an inductive exploratory and descriptive
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23 approach not informed by any prior theory or framework [26]. This approach is flexible due
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26 to lack of alignment with specific epistemological and ontological stance [27,28]. Six
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29 analytic steps were conducted: 1) familiarisation, 2) data coding, 3) initial theme generation,
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33 4) theme development and review, 5) theme refining, defining and naming, 6) writing up.
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40 AUTHOR listened to audio files and read transcripts at least twice to become familiar with
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43 them, whilst making notes on initial impressions and patterns (step 1). Following
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46 familiarisation, AUTHOR worked systematically through the entire data set and conducted
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49 complete coding of all data, in which segments of data were given a label to describe their
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53 area of interest. Coding was supported by NVivo software version 12. Semantic codes were
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57 derived directly from participants' speech or codes where phrases of speech were brief
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4 enough to be directly coded (step 2). AUTHOR then sorted these initial codes into concise
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7 categories (overarching codes), which clearly described the content of the data (step 3). A
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10 reflective diary was kept throughout the coding process by AUTHOR to note reflections on
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13 findings and to ensure a data-driven analytic process.
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20 AUTHOR also familiarised herself with the transcripts (step 1) and then examined
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23 AUTHOR's coding to ensure the codes were data driven with as little interpretation as
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26 possible (step 2). AUTHOR then collated codes that shared a common pattern into themes
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29 (step 3). Again, AUTHOR and AUTHOR met to discuss and refine the themes to ensure they
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32 were descriptive with minimal interpretation (step 4).
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40 A document containing themes, codes within them, and extensive anonymised quotes was
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43 shared with all co-authors in two phases: phase 1 March 2022 and phase 2 October 2022
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45
46 (step 5). This data clinic aimed to minimise researcher interpretation. A document presented
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48
49 theme descriptions and asked co-authors to answer the following questions for each theme: 1)
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52 Is the theme descriptive? 2) Does the theme represent the data accurately? 3) What do you
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55 think the theme tells us about the SDIL from the perspective of industry? AUTHORS
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4 completed the data clinic document in phase 1. Themes were amended based on their
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7 reflections and the document updated in October 2022. AUTHORS completed the data clinic
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10 form in phase 2. Final themes and the manuscript were written up by AUTHOR and reviewed
11
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13 by all co-authors (step 6).
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20 *Patient and Public Involvement Statement*

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22
23 This study is part of the 'Evaluation of the health impacts of the UK Treasury Soft Drinks
24
25
26 Industry Levy (SDIL)' funded by NIHR ([award no. 16/130/01](#)). Project oversight is provided
27
28
29 by an independent study steering committee which contains members of the public.
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37 **Results**

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40 Fourteen participants were recruited (Table 1). Participants' roles within organisations were
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43 diverse; chief officers, directors, and managers with overall responsibility or with specialist
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46 responsibilities for finance, strategy, operations, marketing, public relations or nutrition.
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50 Interviews ranged in length from 26 to 62 minutes. Six additional participants were
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53 approached and took part in informal discussions; three did not participate due to scheduling
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3 issues, and three refused to take part. Five inductively derived, interlinked themes and 15
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7 subthemes were identified (Box 2).
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14 Table 1: Participant details
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Sector Category	N
Drink manufacturers	4
Food and drink manufacturers	3
Supermarkets	3
Industry associations	1
Out-of-home* food and drink manufacturers	1
Out-of-home retailers	1
Advertising consultants	1

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44 ** *“The out-of-home sector is generally considered to be any outlet where food or drink is prepared in a way
45 that means it is ready for immediate consumption, on or off the premises”*[29]
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Box 2: Theme and sub-theme summary.

Theme 1: A level playing field...for some

The SDIL created a level playing field

Milk-based drinks increased the complexity in the out-of-home sector

Challenges for supermarkets with large product portfolios

Theme 2: Complex to implement but no lasting negative effects

Complexities in strategic response – price and product are key

Global companies and internal systems

Contradictory government messaging

Leadership buy-in dictates strategic response

Few long-lasting negative effects & SDIL provided opportunities

Theme 3: Why us? – The SDIL unfairly targets the drinks industry

Sugary drinks in isolation were unfair targets for regulation

Distrust of government's motivations to introduce the SDIL

Theme 4: Consumer is king

Consumer response to product changes resulting from the SDIL

Consumer momentum towards healthier products

Theme 5: The future of the SDIL

Extending to milk and fruit-based drinks

Impact on the wider food and drink industry and on other sectors

Proposal to reverse the SDIL

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37 ***Theme 1: A level playing field...for some***
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40 ***The SDIL created a level playing field***
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43 Industry professionals accepted that the SDIL helped create a level playing field, where no
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46
47 organisation lost out by taking action on health that their competitors did not. Soft drinks
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49
50 manufacturers also discussed that the two years to prepare for the implementation of the
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53 SDIL was sufficient and they were happy they could develop an adequate response within
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57 that time.
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7 *“... legislation level playing fields is so important and that’s why with these big public health*
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10 *initiatives...I’m actually really quite pro government intervention” – Supermarket*
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17 *“We need to create an even playing field, I mean so therefore we need a government to say*
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19
20 *this is the rule and it’s all going to affect you evenly, now go and do your thing.”-*
21
22

23 *Advertising consultant*
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25

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30 *“I’m not aware of any significant implementation or challenges that our members have*
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32
33 *encountered, I mean they did have time to adapt, the legislation was published in good time*
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36
37 *to allow them to understand exactly what they would be required to do” – Trade association*
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44 However, participants also stated that a lack of understanding and consultation from
45
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47 government meant a ‘true’ level playing field for all sectors involved in the sales of sugary
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50 drinks had not been not achieved. The lack of consultation by the government with sectors
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53 who were not soft drinks manufacturers and the exclusion of milk-based sugary drinks led to
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57 this perception.
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7 *“If you’re going to do something like this you want to really do it smartly so everybody feels*
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10 *they’re 100% equally affected and you don’t get this interpretations and this ‘my product is in*
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13 *scope, your product is out of scope’...it doesn’t create the sense of unilateral ‘let’s do this’,*
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17 *you know, which is what it should be, if that makes sense” – Food and drink manufacturer*
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24 *“and then even within the levy itself, you know, we saw that milk-based drinks often carried*
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26
27 *bigger serving sizes and had more total sugar in them than any of our products would. They*
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29
30 *were excluded from the levy as well which looked like a big shortcoming.” Drink*
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33 *manufacturer*
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36 37 38 39 40 ***Milk-based drinks increased the complexity in the out-of-home sector***

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44 Interviewees explained that the government did not think clearly about the technical
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47 implications for retailers and out-of-home sector and that it was easier for soft drink
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50 manufacturers to respond to the levy than it was for other industry actors. A high level of
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53 complexity within the out-of-home sector to manufacture and produce drinks for immediate
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57 consumption led to higher implementation costs; specifically, the exclusion of milk-based
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3
4 drinks and specification around eligibility of drinks mixed with carbon dioxide, water and
5
6
7 ice, and those with and without milk.
8
9

10
11
12
13
14 *“...I don’t think they understood the ways of working and the preparation methods in the out-*
15
16
17 *of-home sector...they were looking at the likes of drinks fountains for carbonated soft drinks*
18
19
20 *because... you would have them coming through a bag and box syrup, they would be mixed*
21
22
23 *with ice or carbon dioxide to give the carbonation or either they could be mixed with water*
24
25
26 *and that would capture those drinks in the out-of-home sector, but there was a vagueness to*
27
28
29 *milk-based drinks” – Out-of-home food and drink manufacturer*
30
31
32
33
34
35
36

37 Thus, the out-of-home sector had to interpret the legislation themselves and apply the SDIL
38
39
40 according to their interpretation, as queries to Her Majesty’s Revenue and Customs (HMRC
41
42
43 – the tax collecting authority in the UK) went unanswered. The out-of-home sector did not
44
45
46
47 perceive two years as enough time to have prepared due to confusion surrounding eligibility.
48
49

50 In contrast, soft drinks manufacturers stated they had had time to prepare.
51
52
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54
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56

57 ***Challenges for supermarkets with large product portfolios***
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4 Supermarkets felt disadvantaged compared to soft drink manufacturers by the complexities of
5
6
7 their sector. They highlighted sector-specific challenges to adapting to the SDIL, including
8
9
10 that their product portfolio not only contains branded drinks, about which they have to make
11
12
13 decisions, but also private label (own brand) drinks. It was described as challenging and time
14
15
16 consuming to manage such a large portfolio and make decisions on each product. Retailers
17
18
19 also felt that they were disadvantaged as their customers expressed confusion at differing
20
21
22 responses by different brands – e.g. ‘sugary’ drinks reformulated to just below the SDIL
23
24
25 threshold but containing both sugar and sweeteners confused customers, with queries directed
26
27
28 at retailers rather than drinks manufacturers.
29
30
31
32
33
34
35
36

37 *“...what branded suppliers chose to do was their choice...different brands choosing to*
38
39
40 *reformulate, resize or inflate, which I think led to a fair bit of customer confusion as to what*
41
42
43 *the hell was going on.” – Supermarket*
44
45
46
47
48
49

50 *“... we tried to make it as clear for customers by putting on all the [shelves] sugar levy*
51
52
53 *applied, so they could very much see...But...when they see a sugar line that’s not [included*
54
55
56 *in the SDIL], that’s when the questions start coming.” – Supermarket*
57
58
59
60

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7 *Theme 2: Complex to implement but no lasting negative effects*
8
9

10 *Complexities in strategic response – price and product are key*
11
12

13 Industry responded to the SDIL by reviewing product portfolios and strategically selecting
14 responses at the individual product level. This portfolio review approach is why responses
15 differed between companies and between products. Research and development (R&D) and
16 consumer testing were costly for industry during this process, and, linking to theme 1, there
17 were increased costs for those companies with larger product portfolios (e.g. supermarkets).
18
19 For the out-of-home sector, additional complications were noted due to confusion over
20 eligibility of some milk-based drinks.
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“...government is very keen to always say “oh just reformulate, it will be easy” but it’s not
easy. It actually takes a lot of time and investment, which isn’t necessarily something that all
companies have the resources to do.” – Drink manufacturer

Consumer testing was vital during the reformulation and decision-making process and
consumer preference dictated the strategy taken. An additional challenge in reformulating

1
2
3
4 drinks described by manufacturers was that sugar serves a functional purpose, in the
5
6
7 mouthfeel of drinks mixed with ice and to prevent ‘brain freeze’, as well as to provide
8
9
10 sweetness.
11
12
13
14
15
16

17 *“... we invested a significant amount of money then actually in developing lots and lots of*
18
19
20 *different formulations with lower sugar to see and testing them with consumers in Great*
21
22
23 *Britain to see whether those recipes, those new recipes would be acceptable to consumers.” –*
24
25
26
27 *Drink manufacturer*
28
29
30
31
32
33

34 *“Because, actually, yes, we could stick sweeteners in everything, but, actually, sugar also has*
35
36
37 *like a functional role” – Out-of-home retailer*
38
39
40
41
42
43

44 Packaging, merchandising and placement were challenges to overcome, particularly for
45
46
47 supermarkets. Decisions were made on own brand products but also on how to retail other
48
49
50 branded products with different responses to the SDIL (e.g. reformulated drinks, reduced and
51
52
53 increased portion sizes, rebranding).
54
55
56
57
58
59
60

1
2
3
4 *"...there were a number of products that didn't reformulate but did drop size. So, again,*
5
6
7 *there's just small considerations in that around how you merchandise it, on shelf all our*
8
9
10 *products are measured and then the shelf layout is essentially structured around the size of*
11
12
13 *these products... So what sounds like a relatively simple change, of dropping from 330ml to,*
14
15
16 *I don't know, 250ml, in reality kind of that complexity flows back through the value chain" –*
17
18
19
20 *Supermarket*
21
22
23
24
25
26

Leadership buy-in dictates strategic response

27
28
29
30 Leadership buy-in to health within a company was discussed as vital in dictating the strategic
31
32
33 response to the SDIL. Participants described this buy-in as making the process simpler and a
34
35
36 lack of buy-in as a barrier to making timely progress.
37
38
39
40
41
42
43

44 *"... I think such a review requires strong leadership and ... our COO was very clear that we*
45
46
47 *needed to step in and we needed to do, you know, do the responsible, brave thing." -Drink*
48
49
50 *manufacturer*
51
52
53
54
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1
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4 *"There are parts of the business that were like "we've always produced sugary drinks and we*
5
6
7 *should continue to produce sugary drinks" and I guess you'll get that from any organisation*
8
9
10 *but having that strong leadership and, you know, complete buy-in from the top team and*
11
12
13 *actually pretty much all the other levels of the organisation, then it's actually quite simple" –*

14
15
16
17 *Drink manufacturer*
18
19
20
21
22

23 *Global companies and internal systems*

24
25
26
27 The cost of setting up internal systems to account for and pay the SDIL was expensive, due to
28
29
30 the requirement to report to HMRC, regardless of whether or not a company involved in the
31
32
33 manufacture or selling of soft drinks was liable to pay the levy. The global nature of many of
34
35
36 these companies was an additional challenge. Response strategies appropriate for a UK
37
38
39 market may not be transferable to other countries, for example reformulation recipes vary due
40
41
42 to differences in consumer palate and storage temperatures/facilities.
43
44
45
46
47
48
49

50 *"...It's ridiculous that, you know, it's cost us half a million pounds just to tell Treasury that*
51
52
53 *actually we don't need to pay it. I mean it's ludicrous really. It doesn't make any sense."* –

54
55
56
57 *Drink manufacturer*
58
59
60

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6
7 *“We want the system to be able to recognise this product has sugar tax applied to it, this is*
8
9
10 *the rate and this is the finished goods litre in terms of that product that you need to apply that*
11
12
13 *rate to. But, of course, that’s for the UK, and then Ireland have a separate system, France*
14
15
16
17 *have a separate system, Mexico have a separate system. “ – Food and drink manufacturer*
18
19
20
21
22

Contradictory government messaging

23
24
25
26
27 There was confusion over the aim of the SDIL and contradictory government messaging;

28
29
30 whether manufacturers needed to pass on price increases to change consumer behaviour.

31
32
33 Participants indicated that they thought price increases should have been passed on to target

34
35
36 individual behaviour change; however, manufacturers stated they had no control over

37
38
39 whether this occurred as retailers set the price for consumers.
40
41
42
43
44
45
46

47 *“...[the] government had slightly mixed messages so it was pretty clear from the Department*

48
49
50 *of Health and PHE [Public Health England] and, for example, back-benchers like the Health*

51
52
53 *Select Committee... that they expected to see prices passed on ... I think the Treasury were*

54
55
56
57 *trying to say, oh soft drinks manufacturers don’t have to pass this on, you know, they could*
58
59
60

1
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3
4 *absorb it if they wanted to. Well, apart from the fact that most businesses won't absorb a cost*
5
6
7 *if they can avoid it for obvious reasons, it was the opposite of what the Health Department*
8
9
10 *and others wanted..." – Drink manufacturer*
11
12
13
14
15
16

Few long-lasting negative effects & SDIL provided opportunities

17
18
19
20 Participants acknowledged that the SDIL did achieve its aim in stimulating product
21
22
23 reformulation to avoid the levy. Although implementation was complex and costly, as
24
25
26 previously illustrated, there were few long-lasting negative effects. Some participants
27
28
29 suggested the SDIL provided opportunities. However, participants were sceptical that the
30
31
32
33
34 SDIL would achieve intended reductions in childhood obesity in the UK.
35
36
37
38
39

40
41 *"we... question why a tax on... on a very small number of sugar containing products that are*
42
43
44 *consumed by either adults or children, why it was thought that that would be a, that policy in*
45
46
47 *isolation would be sufficient to reduce obesity rates." – Drink manufacturer*
48
49
50
51
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1
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4 *“... but certainly from our perspective we didn’t see volume decline as a result of this, that*
5
6
7 *would have been... So you could argue it’s positive fiscal policy from that perspective on it,*
8
9
10 *yeah.” – Food and drink manufacturer*

11
12
13
14
15
16
17 *“I think some of them would have switched back but we’ve gained new consumers as well*
18
19
20 *which is, you know, how we, which through sampling and advertising essentially.” – Drink*
21
22
23 *manufacturer*

30 ***Theme 3: Why us? – The SDIL unfairly targets the drinks industry***

33 ***Sugary drinks in isolation were unfair targets for regulation***

34
35
36
37 Participants felt that the SDIL unfairly targets the soft drinks industry. Participants expressed
38
39
40 their frustration that a single food category was targeted when other food categories bear a
41
42
43 significant proportion of the responsibility for childhood obesity. They expressed the view
44
45
46 that multiple nutrients or calories across many food and drink sectors should be targeted by
47
48
49 regulation if the government is serious about reducing childhood obesity, particularly as
50
51
52 substitution to other non-regulated food categories could negate the impact of the SDIL on
53
54
55
56
57 health.
58
59
60

1
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6
7 *"I think one of the other questions that wasn't answered at the very beginning was why would*
8
9
10 *it be just the soft drink levy, why would you not target cakes and biscuits...that's what we*
11
12
13 *didn't understand at the time." - Food and drink manufacturer*
14
15

16
17
18
19
20 There was consensus among participants that it didn't make sense for the government to
21
22
23 target a category that they considered was already reducing sugar faster than other food
24
25
26 categories. Although the SDIL had accelerated the reformulation progress for some, this was
27
28
29 stated to be the existing direction of travel. Participants expressed the view that the sector had
30
31
32 been unfairly penalised, and that sectors which reformulate should be praised rather than
33
34
35 targeted by regulation when other unregulated categories have contributed little towards
36
37
38 achieving health goals.
39
40
41
42
43
44
45
46

47 *"... the soft drinks category was already well embarked on the journey to*
48
49
50 *reformulation...part of the industry's disappointment and frustration about the announcement*
51
52
53 *of the levy was that they were already absolutely going to deliver what the levy has now kind*
54
55
56 *of made them deliver" – Trade association*
57
58
59
60

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7 ***Distrust of government's motivations to introduce the SDIL***
8
9

10 Participants stated that the SDIL was politically motivated, not an evidence-based policy.
11

12
13 Government policies targeting obesity were described as contradictory and not aligned with
14
15
16
17 one another, particularly the proposed ban on advertising of less healthy foods on TV and
18
19
20 online [30]. According to participants, the advertising ban does not distinguish between
21
22
23 reformulated and non-reformulated products, and acts as a disincentive to spending on
24
25
26 reformulation if they cannot recoup their investment through advertising new products.
27
28
29
30
31
32

33
34 *“So if you can take something from 40g of sugar to 20g of sugar but you'd only advertise on*
35
36
37 *TV is it's 5(g), then why bother, right, and it also means that they can't tell the world, look at*
38
39
40 *this amazing thing we've done, we've reformulated this, you know” – Advertising consultant*
41
42
43
44
45
46

47 Perceived disconnectedness between policies led to distrust in the government and a belief
48
49
50 that government obesity policy is poorly planned. Distrust was compounded by some
51
52
53 companies appearing to be successful at lobbying the government following the
54
55
56 announcement, resulting in changes to the regulations as a result of this lobbying, rather than
57
58
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60

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3
4 on the basis of health or nutrition, in particular the decision to exclude milk-based drinks.
5
6

7 Participants stated this was motivated by some companies being able to gain a competitive
8
9
10 advantage, as some milk-based drinks have higher sugar content than soft drinks. Participants
11
12
13 also referred to the SDIL as a political tool to distract from other things in the budget in
14
15
16 which it was announced. The fact that the proposal to establish the SDIL had been kept
17
18
19 secret, and the announcement was a shock to many, led to this view.
20
21
22
23
24
25
26

27 *"... I think this was a decision taken within the Treasury by quite a small group of people and*
28
29
30 *it was announced during a Budget by a Chancellor who was trying to distract from some*
31
32
33 *other economic figures that he maybe wasn't too pleased about."* – Drink manufacturer
34
35
36
37
38
39

40 *"I think the timing was a surprise... Yeah and the way it was done without any form of*
41
42
43 *consultation or pre-announcement."* – Drink manufacturer
44
45
46
47
48
49

50 ***Theme 4: Consumer is king***

51 52 53 ***Consumer response to product changes resulting from the SDIL*** 54 55 56 57 58 59 60

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3
4 Industry participants discussed throughout all previous themes that meeting the wishes of
5
6
7 consumers was the priority when responding to the SDIL. Taste preferences and tolerance of
8
9
10 reformulation changes were critical and companies expressed concerns that consumers might
11
12
13 dislike reformulated products if they changed dramatically in a short time period. Company
14
15
16 responses to the SDIL, as well as health and environmental issues more broadly, were vital to
17
18
19 maintaining brand loyalty and company reputation in the eyes of consumers. The media were
20
21
22 seen as influential in shaping consumer preferences and company reputation, as some
23
24
25 newspapers had used graphics to show the sugar content of drinks and this was considered to
26
27
28 have influenced purchasing patterns. A small group of very loyal consumers can cause a
29
30
31 backlash publicly, which can be picked up by both the news media and social media.
32
33
34
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36
37
38
39
40
41

42 *"... obviously what's critical from our perspective is developing a product that consumers*
43 *still like the taste of whilst reducing their sugar intake so that we were trying to marry-up*
44 *those two things." – Drink manufacturer*
45
46
47
48
49
50
51
52
53

54 *"I think the overall ethos is that you know we can make foods that little bit healthier, we can*
55 *produce healthier foods but if they don't taste good the consumer isn't going to consume*
56
57
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59
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1
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4 *them, they're not going to repeat purchase them so we really do believe that bringing the two*
5
6
7 *together is a real winning space and is where consumers' heads are at." – Out-of-home food*
8
9
10 *and drink manufacturer*

Consumer momentum towards healthier products

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12
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14
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18
19
20 Participants stated consumer purchasing patterns are changing, with consumers increasingly
21
22
23 choosing lower sugar products, which may also have driven reformulation prior to the SDIL.
24
25
26
27 The policy acted as a catalyst for increasing consumer demand for sugar reduction and some
28
29
30 respondents also highlighted the role of social media in driving these trends. Consumers were
31
32
33 also reported by participants as "moving away from" artificial ingredients, which leads to
34
35
36 challenges in reformulation using non-nutritive sweeteners. Some participants suggested that
37
38
39 consumers were not lost when sugar was reduced in their favourite products, due to consumer
40
41
42 preferences moving towards prioritising health. It was important to participants and their
43
44
45 organisations that consumers have enough choice and there were concerns that regulation
46
47
48 could limit choice from some.
49
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51
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3
4 *"...consumer research that we did which proved that consumers are moving away from*
5
6
7 *sugary drinks, they still want sweet, great-tasting drinks but they just don't want the sugar*
8
9
10 *and the calories" – Drink manufacturer*

11
12
13
14
15
16
17 *"A lot of our consumers like ..., , they don't want to have sweeteners, they don't want to have*
18
19
20 *preservatives" – Drink manufacturer*

21 22 23 24 25 26 27 ***Theme 5: The future of the SDIL***

28
29
30 Participants discussed the potential of expanding the SDIL to fruit and milk-based drinks, the
31
32
33 wider threat to other products, reformulation in other categories, changes in other sectors as a
34
35
36 result of the SDIL and the possibility of its reversal by government.
37
38
39
40
41
42
43

44 ***Extending to milk and fruit-based drinks***

45
46
47 Concerns were expressed over the Chancellor's proposal to extend the SDIL to milk-based
48
49
50 and fruit-based drinks at the time of the announcement. Participants stated the nutritional
51
52
53 benefits of these meant that natural sugars (fructose and lactose) should not be subject to the
54
55
56 same regulation as soft drinks. The vitamin and mineral content of these drinks was also
57
58
59
60

1
2
3 discussed as a benefit to children who may not be consuming sufficient fruit, vegetables or
4
5
6
7 calcium from other sources. Reformulation of these drinks was considered particularly
8
9
10 challenging, as naturally occurring sugars cannot be removed in the same way as added
11
12
13 sugars in soft drinks.
14
15
16
17
18
19

20 *"I don't think politicians think it's done. Obviously we've got the review next year on*
21
22
23 *whether milk-based drinks should be included, and then I think it's 2021 when they'll review*
24
25
26 *the levels as well." – Drink manufacturer*
27
28
29
30
31
32

33
34 *"... Now you have products that are being developed with high levels of sugar in them so that*
35
36
37 *really does need to be addressed but you don't want to go down the route of demonising milk*
38
39
40 *because it is still a great source of nutrition." – Out-of-home food and drink manufacturer*
41
42
43
44
45
46

47 ***Impact on the wider food and drink industry and in other sectors***

48
49

50 A wider threat to other products, particularly those included in the PHE Sugar Reduction
51
52
53 Strategy [31] (another element of the Childhood Obesity Plan that encouraged voluntary
54
55
56 industry reformulation) was discussed. The SDIL demonstrated that the government was
57
58
59
60

1
2
3
4 willing to implement policy to regulate the food industry in a way that has not been done
5
6
7 before. Food and drink companies discussed their companies' attempts to reformulate
8
9
10 products not included in the SDIL. The SDIL was described as a rallying call for industry to
11
12
13 improve the healthfulness of products. It was also perceived to cause a ripple effect not just
14
15
16 regarding health but also sustainability, environment, media and promotions.
17
18
19
20
21
22

23
24 *"Yeah, I think there is a ripple effect. So, I think it can be both positive and negative. I think*
25
26
27 *in terms of positive, I think it can force companies to reformulate and be more innovative in*
28
29
30 *driving the use of other ways of sweetening products" - Food and drink manufacturer*
31
32
33
34
35
36

37 *"I think the social justice piece is only going to get louder and I think that's probably an*
38
39
40 *opportunity for the environment and public health " - Supermarket*
41
42
43
44
45
46

47 ***Proposal to reverse the SDIL***

48
49

50 Comments made by Boris Johnson in his leadership campaign to become prime minister
51
52
53 (July 2019), suggesting he might consider repealing the SDIL, were not taken well by some
54
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1
2
3 participants; who indicated that companies had invested heavily in implementing the levy.
4
5

6
7 However, some participants suggested that reversing the SDIL would be well tolerated.
8
9

10
11
12
13 *"If it was removed... we'd still be doing what we're doing and we'd still be aiming to keep*
14
15
16 *the sugar low...if it is removed we're not going to change our core brand back, you know,*
17
18 *they're staying where they're staying." – Drinks manufacturer*
19
20
21
22

23
24
25
26
27 *"I think, yeah, the industry would be happy to see the back of it because it's just*
28
29
30 *cumbersome, it's just something, it's just another thing to administer." - Food and drink*
31
32
33 *manufacturer*
34
35

36
37
38
39
40 *"I suppose it does feel like a backtrack [reversing the SDIL]. Like we've made all this work*
41
42
43 *and it was at the time quite painful in the sense of it was such a massive change through the*
44
45
46 *supply chain so there was so many things to think about" – Out-of-home food and drink*
47
48
49
50 *manufacturer*
51
52

53 54 55 56 57 **Discussion** 58 59 60

Summary

Senior industry perspectives on the SDIL are described in five main themes. Theme 1: *A level playing field...for some*, Theme 2: *Complex to implement, but no lasting negatives*, Theme 3: *Why us? – the SDIL unfairly targets the drinks industry*, Theme 4: *The consumer is king*, and Theme 5: *The future of the SDIL*. The SDIL appeared to create a level playing field which industry accepted, however, this was perceived as inadequate due to the exclusion of milk-based drinks and targeting only SSBs, giving some a competitive advantage. Implementation of the SDIL was time consuming and complex, leading to high financial investment to prepare for it. Strategic response to the SDIL was dependent on leadership buy-in and particularly governed by potential consumer responses to product changes associated with the policy. The announcement and subsequent implementation of the SDIL caused a ripple effect beyond the soft drinks industry. The wider food and drink industry perceived it as evidence of the government being willing to regulate to help achieve health goals.

Strengths and limitations

Strengths include the use of elite interviewing techniques to build relationships with and solicit meaningful responses from participants. These techniques allowed us to obtain the

1
2
3 views of senior professionals from commercial organisations who have often been difficult to
4
5
6 recruit to other studies [32]. As evident from the challenges described in the out-of-home
7
8
9 sector and supermarkets, including respondents outside of manufacturing allowed wider
10
11
12 exploration of the systemic impacts of the SDIL. A limitation of this work, however, is that
13
14
15 interviews were carried out over a long period of time due to challenges in recruitment.
16
17
18 Therefore, not all participants experienced the same political context, such as Boris Johnson's
19
20
21 threats to reverse the SDIL in July 2019.
22
23
24

25
26
27 A descriptive approach was taken and emphasised throughout, including through our
28
29
30 use of independent double coding and interpretation checked by researchers not directly
31
32
33 involved in the initial analysis, to ensure that participant perspectives were represented
34
35
36 accurately and neutrally in theme generation and commentary. Adopting a descriptive
37
38
39 approach could, however, also be viewed as a limitation of this work. Participants were
40
41
42 recruited based on the condition that their responses were anonymous and the researchers
43
44
45 were adopting a position of neutrality. Therefore, it would be unethical to pursue more
46
47
48 interpretive analyses of these responses. There is, however, overlap between some of the
49
50
51 responses provided by participants in this work to the 'typical' responses explored by other
52
53
54 researchers as an industry 'playbook' [33]. Although it was not the aim of the work to
55
56
57
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1
2
3
4 explore participant responses in relation to the commercial determinants of health, it is
5
6
7 possible that participant responses were censored and did not represent the reality of what
8
9
10 occurred behind the scenes in the food and drink industry in relation to the SDIL. Further,
11
12
13 although researcher neutrality was expressed to participants during recruitment and data
14
15
16 collection, the position of interviewers AUTHOR and AUTHOR as public health academics
17
18
19 could also have led to participants censoring their responses.
20
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26

27 *Relationship to prior knowledge*

28
29
30 Our findings indicate that the UK soft drinks industry was reformulating products to
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32
33 lower sugar alternatives several years before the SDIL was introduced. The direction of travel
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35
36 was towards healthier drinks as the primary offer for consumers, with the SDIL accelerating
37
38
39 the pace of change. This finding is consistent with previous qualitative and quantitative
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41
42 findings [17,34]. Suggestions by our participants of the possibility of consumers substituting
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44
45 other product categories such as confectionary for SSBs, however, have not been born out in
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47
48 quantitative analyses (Rogers et al., 2022).
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54 Consumer preferences for healthier products, and our finding that industry prioritises
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56
57 these health preferences in their decision making, are likely to have triggered the soft drinks
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4 industry to reformulate products prior to the announcement of the SDIL. The advocacy (e.g.
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6
7 Jamie Oliver and Action on Sugar) in the early 2010s and government threats to regulate
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9
10 industry [35] may have also increased consumer awareness about the health impact of sugar
11
12
13 consumption and had a ‘signalling effect’ to consumers to reduce their sugar consumption
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17 [36].
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21 Participants in our study suggested that the SDIL was adopted by the Government
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23 because of the existing popularity of sugar reduction among the public. It is likely that the
24
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26 UK public was aware that SSBs harm health much earlier than the policy announcement,
27
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29 resulting from media activity, such as that related to Jamie Oliver’s campaigning [37], PHE’s
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33 [38] and WHO’s reports on sugar[39].
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38 Participants also discussed adopting a portfolio review approach, where each product
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40 would be assessed individually, when determining their response to the SDIL, which aligns
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42
43 with previous findings that soft drink companies monitor their internal and external contexts,
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45
46 to determine their products’ market position in response to a stimulus such as the SDIL, and
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49 then respond with marketing or non-marketing activity to influence the purchasing of soft
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53 drinks [17].
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Interpretation and implications for policy and practice

Participants expressed concern that policies introduced to combat obesity and other societal issues should be complementary not contradictory. The proposed ban on TV and online advertising of high fat, salt and sugar (HFSS) products by the UK Government [40] was viewed by industry to be misguided as they stated it may stop them being able to advertise their reformulated products; not just those impacted by the SDIL but products voluntarily reformulated which would still be classified as HFSS. Stakeholder requests for consistency across policy areas was also expressed by interviewees regarding this advertising ban [32]. This indicates that a more consistent approach to determining which products government wants industry to change would help ensure policies do not undermine one another and build trust in government amongst industry.

Interviewees reported that the technical aspects of drink production, particularly in the out-of-home sector, were not adequately accounted for in the design of the SDIL. An unintended consequence of the milk-based drink exclusion, led to some organisations having to interpret the particulars of the SDIL whilst their queries to HMRC went unanswered. Experiences of participants in this work align with findings that UK Government policy is set up poorly for the purposes of adequate monitoring and evaluation (D. R. Z. Theis & White,

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3 2021). Future policy should engage with the wider food and beverage sector once a policy is
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7 certain to be implemented, to design and communicate technicalities in ways that avoid
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10 industry having to interpret themselves what is required and provide timely responses to
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13 queries surrounding implementation.
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20 *Unanswered questions and future research*

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23 Respondents indicated that lobbying regarding the exclusion of milk-based drinks
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26 from the SDIL had been successful. A further avenue for research would be to understand in
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29 more detail the access the food and drink industry had to government during the policy
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32 making process, and to explore why some of these attempts to influence policy were
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35 successful and others not. While this research focused on the SDIL, it would be interesting to
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37
38 explore industry stakeholder views on health regulation more broadly – particularly to
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40
41 examine whether the sentiment of desiring a level playing field can be generalised to other
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47 policy areas.
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54 *Conclusion*

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4 This study explored food and drink industry perspectives on the SDIL. We found that
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7 industry accepted that legislation was useful in levelling the commercially competitive
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10 playing field. However, in practice participants stated that the SDIL had not created a 'true'
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12
13 level playing field as little consideration had been given to excluded product categories
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16 during policy design. Implementation of the SDIL was seen as challenging and costly and
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19 leadership buy-in dictated strategic responses to the SDIL. However, no lasting negative
20
21
22 effects of implementing the SDIL were reported. Participants stated that only targeting sugary
23
24
25 soft drinks was unfair due to the progress already made in the category compared to others
26
27
28 (e.g., confectionary). The impact of the SDIL was felt beyond the soft drinks industry,
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30
31 driving other product sectors to reformulate in anticipation of future regulation. The
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33
34 possibility of repeal of the SDIL was met with a mixed response: some stated it would be
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37 welcomed by industry while others suggested that given the significant investment already
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40 made to comply with the policy, reversing the SDIL would be unwelcome.
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50 **Acknowledgements:** For the purpose of Open Access, the author has applied a Creative
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4 **Competing Interests:** None
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10 **Contributorship Statement:** Dr. Catrin P Jones: Conceptualization, Methodology, Formal
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29 & Editing, Supervision, Funding acquisition. Prof. Jean Adams: Formal analysis, Writing -
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35 & Editing. Prof. Harry Rutter: Formal analysis, Writing - Review & Editing, Funding
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38 acquisition. Prof. Richard Smith: Formal analysis, Writing - Review & Editing, Funding
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41 acquisition. Prof. Martin White: Conceptualization, Methodology, Resources, Supervision,
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47 Project administration, Funding acquisition
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3
4 **Funding:** This project was funded by the NIHR Public Health Research programme (Grant
5
6
7 Nos. 16/49/01 and 16/130/01). At the time this study was conducted CPJ, MW, ELR, HF,
8
9
10 TLP, DT, JA, OA, SA, were also supported in part by: Programme grants to the MRC
11
12
13 Epidemiology Unit from the Medical Research Council (grant No. MC_UU_12015/6 and
14
15
16 MC_UU_00006/7); and the Centre for Diet and Activity Research (CEDAR), a UKCRC
17
18
19 Public Health Research Centre of Excellence – funding from the British Heart Foundation,
20
21
22 Cancer Research UK, the Economic and Social Research Council, the Medical Research
23
24
25 Council, the National Institute for Health Research, and the Wellcome Trust, under the
26
27
28 auspices of the UK Clinical Research Collaboration is gratefully acknowledged. HF received
29
30
31 funding for her PhD studentship from the Economic and Social Research Council and Public
32
33
34 Health England, and she has received further discretionary funding from the Economic and
35
36
37 Social Research Council and Murray Edwards College, Cambridge. The views expressed are
38
39
40 those of the authors and not necessarily those of the any of the above-named funders. The
41
42
43 funders had no role in study design, data collection and analysis, decision to publish, or
44
45
46 preparation of the manuscript.
47
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49
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51

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56
57 **Data sharing statement:** The lead author has full access to the data reported in the manuscript.
58
59
60

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7 **Ethics approval statement:** The study was approved by the Humanities and Social Science

8
9
10 Ethics Committee at the University of Cambridge, UK. No approval ID was provided by this
11
12
13 committee.
14
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BMJ Open

Industry views of the UK Soft Drinks Industry Levy: a thematic analysis of elite interviews with food and drink industry professionals, 2018-20

Journal:	<i>BMJ Open</i>
Manuscript ID	bmjopen-2023-072223.R1
Article Type:	Original research
Date Submitted by the Author:	08-Jun-2023
Complete List of Authors:	Jones, Catrin; University of Cambridge, MRC Epidemiology Unit Forde, Hannah; University of Cambridge, MRC Epidemiology Unit; University of Oxford, Nuffield Department of Primary Care Health Sciences Penney, Tarra; York University, Global Food System and Policy Research, School of Global Health, Faculty of Health Theis, Dolly; University of Cambridge, MRC Epidemiology Unit Cummins, Steven; London School of Hygiene & Tropical Medicine, Population Health Innovation Lab, Department of Public Health, Environments & Society, Faculty of Public Health and Policy Adams, J; University of Cambridge, MRC Epidemiology Unit Law, Cherry; University of Reading, Department of Agri-Food Economics and Marketing Rutter, Harry; University of Bath Department of Social and Policy Sciences, Social and Policy Sciences Smith, Richard ; University of Exeter, Faculty of Health and Life Sciences White, Martin; University of Cambridge, MRC Epidemiology Unit
Primary Subject Heading:	Health policy
Secondary Subject Heading:	Qualitative research
Keywords:	Health policy < HEALTH SERVICES ADMINISTRATION & MANAGEMENT, Public health < INFECTIOUS DISEASES, QUALITATIVE RESEARCH

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7 **with food and drink industry professionals, 2018-20**
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26 **Keywords:** Soft drinks, Soft drinks industry levy, Food and drink industry, sugar sweetened
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29 beverage
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36 **Word count:** 6550
37
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43 Abstract

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46 **Background:** The UK Soft Drinks Industry Levy (SDIL), implemented in 2018, has been
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48
49 successful in reducing the sugar content, and purchasing, of soft drinks, with limited financial
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52 impact on industry. Understanding the views of food and drink industry professionals
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55 involved in reacting to the SDIL is important for policymaking. However, their perceptions
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58 of the challenges of implementation and strategic responses are unknown.
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4 ***Aim:*** To explore how senior food and drink industry professionals viewed the SDIL.
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7 ***Methods:*** We undertook a qualitative descriptive study using elite interviews with 14 senior
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10 professionals working in the food and drink industry. Braun and Clarke’s approach to
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12
13 thematic analysis was used to analyse the data, taking an inductive exploratory and
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16
17 descriptive approach not informed by prior theory or frameworks.
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20 ***Results:*** Five main themes were identified: *(1) A level playing field...for some*; Industry
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22
23 accepted the SDIL as an attempt to create a level playing field but due to the exclusion of
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26
27 milk-based drinks, this was viewed as inadequate. *(2) Complex to implement, but no lasting*
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29
30 *negatives*; The SDIL was complex, expensive and time consuming to implement, with
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32
33 industry responses dependent on leadership buy-in. *“(3) Why us? – the SDIL unfairly targets*
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35
36 *the drinks industry”*; soft drinks are an unfair target when other categories also contain high
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38
39
40 sugar. *“(4) The consumer is king”*; Consumers were a key focus of the industry response to
41
42
43 this policy. *“(5) The future of the SDIL”*; There appeared to be a wider ripple effect, which
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47 primed industry to prepare for future regulation in support of health and environmental
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51 sustainability.
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4 **Conclusions:** Insights from senior food and drink industry professionals illustrate how sugar
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7 sweetened beverage taxes might be successfully implemented and improve understanding of
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10 industry responses to taxes and other food and drink policies.
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17 **Strengths and Limitations**

- 20 • This qualitative study explored how senior food and drink industry professionals
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22 viewed the SDIL.
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- 25 • We undertook elite interviews with 14 professionals working in the food and drink
26
27 industry, who have often been difficult to recruit in other studies.
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29
- 30 • Braun and Clarke's thematic analysis taking a descriptive approach was used to
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32 analyse the data.
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- 35 • Elite interviewing methods allow for the building of relationships to elicit meaningful
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37 responses from participants.
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- 40 • Due to recruitment challenges, interviews were carried out over a long period of time,
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42 meaning participants experienced different political contexts when data was collected.
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Introduction

Diet-related non-communicable diseases are a major and growing problem, responsible for over 11 million deaths globally each year [1]. Sugar consumption is of particular concern, with the World Health Organization (WHO) recommending member states introduce sugar-sweetened beverage (SSB) taxes [2]. Reviews suggest that they reduce sales of, increase prices of and encourage reformulation of SSBs [3–5] and over 100 SSB taxes have been implemented worldwide covering 52% of the world's population [6]. SSB taxes have a variety of designs with 87% excise taxes [6]. The WHO recommend that a tiered SSB tax be introduced in countries with high administrative capacity, similar to that which has been introduced in the UK [2]. The Soft Drinks Industry Levy (SDIL) was announced on 16th March 2016 and implemented in the United Kingdom (UK) on 6th April 2018. According to the budget speech by George Osborne, Chancellor of the Exchequer at the time, it was designed to incentivise manufacturers of SSBs to reformulate their products [7] via charging a levy on soft drinks produced by companies when they leave the warehouse or when imported into the country [8]. Integrated in August 2016 as part of the UK Government's Childhood Obesity: A Plan For Action [9], the SDIL consists of two tiers (for particulars of the tax see box 1). A public consultation on the proposals between August - October 2016 set

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2
3
4 out the plans for the tiers and exclusions as described in Box 1. Few changes were made as a
5
6
7 result of this consultation and the SDIL was given royal assent on 27th April 2017. The
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9
10 Government published a second chapter of its childhood obesity plan in 2018, which
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12
13 suggested the SDIL may be extended to milk-based drinks, though this has not yet occurred
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17 [10].
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34 **Box 1: Soft Drinks Industry Levy Particulars [7]**

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37 **Eligible drinks:**

- 38 • ≥ 8 g total sugar per 100 mL charged at 24 pence per litre
- 39
- 40 • ≥ 5 g and < 8 g total sugar per 100 mL charged at 18 pence per litre
- 41
- 42
- 43
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- 46

47 **Exemptions:**

- 48 • Drinks containing more than 75% milk or 1.2% alcohol
- 49
- 50
- 51 • Alcohol substitute drinks
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- 56 • Powdered drinks
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- 100% fruit juices
- Manufacturers selling under one million litres of drinks per year[11]

The SDIL was one of the first SSB fiscal interventions explicitly designed to incentivise reformulation [7,12,13]. This aim was largely achieved, substantially reducing overall SSB sugar content, and inducing a major shift of drinks from the higher levy tier to the lower tier and untaxed bracket between 2016 and 2018 (Scarborough et al., 2020). Reformulation is reflected in purchases of sugar from SSBs, with [14]. Prior to implementation of the SDIL, the food and drinks industry (hereafter referred to as ‘industry’) viewed the SDIL as having a potentially negative impact on profits resulting in job losses [15–17]. A negative stock market reaction to the SDIL announcement was observed, but this only lasted two days [18]. Similarly, a negative impact on company domestic turnover was observed following the announcement of the SDIL, but this resolved by the time of its implementation [19].

Critical to the success of the SDIL is the implementation of and reaction to the regulations by the drink industry. Therefore, it is important to understand perspectives of the industry as well as those who work in it regarding the implementation of such taxes. Previous work has

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2
3 investigated industry perspectives of the SDIL expressed through the news media [15,20–23]
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6
7 and the views of industry, civil society and academic participants on how marketing changed
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10 in response to the SDIL [24]. A notable gap in the literature, however, is perspectives of the
11
12
13 SDIL from the commercial sector, not communicated publicly through news media nor
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15
16 focused solely on marketing responses. Important learning can be obtained by exploring the
17
18
19 perspectives of commercial actors involved in responding to regulation. Interviews with
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22
23 senior members of industry can help examine the impact of the SDIL on both the soft drinks
24
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26 industry and wider food and drink industry, an avenue not previously explored. This study
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29 therefore aimed to address these knowledge gaps and inform policymaking by exploring the
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31
32 perspectives of senior industry professionals regarding the UK SDIL.
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41 **Methods**

42 43 *Study Design*

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46 This study adopted a qualitative descriptive design involving elite interviews with senior
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49 industry professionals.
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57 *Methodological Orientation*

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4 This research took an experiential qualitative approach, within a critical realist position.
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7 Participant perspectives and perceptions were prized over researcher interpretations, and
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9

10 reality was derived from our participants' words and meaning, rather than a reality
11
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13 constructed through researchers' interpretation of their words [25]. A descriptive approach
14
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16 was used to explore how the SDIL was viewed from the position of our participants.
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23 ***Research Team***

24
25
26 Prof Martin White (MW), Prof Steven Cummins (SC), Prof Jean Adams (JA), Prof Rich
27
28

29 Smith (RS) and Prof Harry Rutter (HR) secured funding for the overall evaluation of the
30
31

32 SDIL within which this study formed a part [26]. Interviews were conducted by Postdoctoral
33
34

35 Research Associates Dr. Tarra L Penney (TLP) and Dr. Catrin P Jones (CPJ). TLP led the
36
37

38 design of data collection and CPJ led the design of the analysis. MW & SC provided
39
40

41 guidance on the design of both elements. TLP and CPJ recruited and interviewed participants.
42
43

44
45
46 CPJ led the analysis with support from Dr Hannah Forde (HF). HF conducted secondary
47
48

49 coding to support theme generation and interpretation. All authors previously mentioned, as
50
51

52 well as Dr Dolly Theis (DT) and Dr Cherry Law (CL) were involved in data analysis and
53
54

55 interpretation, as well as drafting this manuscript.
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Participants

Senior professionals from the soft drinks, food and other drinks industries were recruited to this study using purposive and snowball sampling. We adopted 'elite interviewing' methods to maximise involvement of senior professionals in positions of influence within their organisation and with high levels of responsibility [27]. This technique provides a series of strategies to support recruitment of difficult to access key participants, and to ensure the validity and reliability of data [28]. The principles of elite interviewing were used to inform recruitment including stronger emphasis on the maintenance of trust, importance of interview tone of the interview, preparing appropriately, and engaging in and tailoring dialogue relevant to each informant, more so than in traditional interviews [29,30].

Individuals were considered eligible to participate based on the following criteria: a) currently or previously held a high-level industry position (at the managerial, director or chief officer level), b) their organisation and their professional role was directly or indirectly impacted by the SDIL and c) they could provide a novel perspective, determined by their job role or the company they work for not previously heard in our interviews, to ensure a range

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4 of views. Recruitment typically involved an email introduction by a member of the team or
5
6
7 informant contact, although CPJ also attended industry food events and recruited face to face.
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9

10 Initial contact was followed by an informal telephone conversation with TLP or CPJ to
11
12
13 discuss the research purpose, team and informant interests and perspectives, ultimately
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16 proceeding to full participation via telephone interview.
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23 *Data Collection*

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25
26 Telephone interviews were conducted from June 2018 to June 2020. Participant information
27
28
29 sheets were sent to potential participants prior to participating in the informal discussion.
30
31
32
33 Informed consent was obtained verbally prior to commencement of the formal telephone
34
35
36 interview, which was digitally audio-recorded. Interviews were undertaken using a minimally
37
38
39 structured topic guide containing three broad areas of inquiry: a) Can you tell me about your
40
41
42 role and organization? b) Can you tell me about your sector as a whole? c) What do you
43
44
45 know about the UK Soft Drinks Industry Levy and its impacts? Elite interviewing
46
47
48 necessitates informed and adaptive dialogue [29,31], meaning participants could engage in
49
50
51 ways most relevant to their specific expertise or experiences within these broad areas.
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57 Interviews were transcribed verbatim by a trusted external company, and transcripts were
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4 checked against the audio files by CPJ to identify any inaccuracies. Transcripts were
5
6
7 anonymised prior to analysis by removing names of people, organisations, and brands.
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13 *Analysis*

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17 Analysis commenced once all interviews had been conducted and transcribed. Braun and
18
19
20 Clarke's thematic analysis was used, taking an inductive exploratory and descriptive
21
22
23 approach not informed by any prior theory or framework [32]. This approach is flexible due
24
25
26 to lack of alignment with specific epistemological and ontological stance [33,34]. Six
27
28
29 analytic steps were conducted: 1) familiarisation, 2) data coding, 3) initial theme generation,
30
31
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33 4) theme development and review, 5) theme refining, defining and naming, 6) writing up.
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40 CPJ listened to audio files and read transcripts at least twice to become familiar with them,
41
42
43 whilst making notes on initial impressions and patterns (step 1). Following familiarisation,
44
45
46
47 CPJ worked systematically through the entire data set and conducted complete coding of all
48
49
50 data, in which segments of data were given a label to describe their area of interest. Coding
51
52
53
54 was supported by NVivo software version 12. Semantic codes were derived directly from
55
56
57 participants' speech or codes where phrases of speech were brief enough to be directly coded
58
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4 (step 2). CPJ then sorted these initial codes into concise categories (overarching codes),
5
6
7 which clearly described the content of the data (step 3). A reflective diary was kept
8
9
10 throughout the coding process by CPJ to note reflections on findings and to ensure a data-
11
12
13 driven analytic process.
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20 HF also familiarised themselves with the transcripts (step 1) and then examined CPJ's coding to
21
22
23 ensure the codes were data driven with as little interpretation as possible (step 2). CPJ then
24
25
26 collated codes that shared a common pattern into themes (step 3). Again, CPJ and HF met to
27
28
29 discuss and refine the themes to ensure they were descriptive with minimal interpretation
30
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32
33 (step 4).
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40 A document containing themes, codes within them, and extensive anonymised quotes was
41
42
43 shared with all co-authors in two phases: phase 1 March 2022 and phase 2 October 2022
44
45
46
47 (step 5). This data clinic aimed to minimise researcher interpretation. A document presented
48
49
50 theme descriptions and asked co-authors to answer the following questions for each theme: 1)
51
52
53 Is the theme descriptive? 2) Does the theme represent the data accurately? 3) What do you
54
55
56 think the theme tells us about the SDIL from the perspective of industry? JA, DT, CL
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4 completed the data clinic document in phase 1. Themes were amended based on their
5
6
7 reflections and the document updated in October 2022. SC, MW, HR & RS completed the
8
9
10 data clinic form in phase 2. Final themes and the manuscript were written up by CPJ and
11
12
13 reviewed by all co-authors (step 6).
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20 *Patient and Public Involvement Statement*

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22
23 This study is part of the 'Evaluation of the health impacts of the UK Treasury Soft Drinks
24
25
26 Industry Levy (SDIL)' funded by NIHR ([award no. 16/130/01](#)). Project oversight is provided
27
28
29 by an independent study steering committee (ISSC) which contains members of the public.
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31
32
33 The ISSC for the overall project met biannually from 2017 – 2023 and were asked to provide
34
35
36 advice on methodology as well as interpretation of our findings.
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44 **Results**

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46
47 Fourteen participants were recruited (Table 1). Participants' roles within organisations were
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49
50 diverse; chief officers, directors, and managers with overall responsibility or with specialist
51
52
53 responsibilities for finance, strategy, operations, marketing, public relations or nutrition.
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57 Interviews ranged in length from 26 to 62 minutes. Six additional participants were
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3 approached and took part in informal discussions; three did not participate due to scheduling
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7 issues, and three refused to take part. Five inductively derived, interlinked themes and 15
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10 subthemes were identified (Box 2).
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24 Table 1: Participant details
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Sector Category	N
Drink manufacturers	4
Food and drink manufacturers	3
Supermarkets	3
Industry associations	1
Out-of-home* food and drink manufacturers	1
Out-of-home retailers	1
Advertising consultants	1

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54 *** “The out-of-home sector is generally considered to be any outlet where food or drink is prepared in a way
55 that means it is ready for immediate consumption, on or off the premises”[35]*
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57

58 Box 2: Theme and sub-theme summary.
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60

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4 Theme 1: A level playing field...for some

5 *The SDIL created a level playing field*

6 *Milk-based drinks increased the complexity in the out-of-home sector*

7 *Challenges for supermarkets with large product portfolios*

8
9
10
11 Theme 2: Complex to implement but no lasting negative effects

12 *Complexities in strategic response – price and product are key*

13 *Global companies and internal systems*

14 *Contradictory government messaging*

15 *Leadership buy-in dictates strategic response*

16 *Few long-lasting negative effects & SDIL provided opportunities*

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22
23 Theme 3: Why us? – The SDIL unfairly targets the drinks industry

24 *Sugary drinks in isolation were unfair targets for regulation*

25 *Distrust of government's motivations to introduce the SDIL*

26
27
28
29 Theme 4: Consumer is king

30 *Consumer response to product changes resulting from the SDIL*

31 *Consumer momentum towards healthier products*

32
33
34
35 Theme 5: The future of the SDIL

36 *Extending to milk and fruit-based drinks*

37 *Impact on the wider food and drink industry and on other sectors*

38 *Proposal to reverse the SDIL*

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49 ***Theme 1: A level playing field...for some***

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52 ***The SDIL created a level playing field***

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54
55 Industry professionals accepted that the SDIL helped create a level playing field, where no

56
57
58 organisation lost out by taking action on health that their competitors did not "... legislation

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60

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4 *level playing fields is so important and that's why with these big public health*
5
6
7 *initiatives...I'm actually really quite pro government intervention” – Supermarket. Soft*
8
9
10 drinks manufacturers also discussed that the two years to prepare for the implementation of
11
12
13 the SDIL was sufficient and they were happy they could develop an adequate response within
14
15
16 that time. *“I'm not aware of any significant implementation or challenges that our members*
17
18
19 *have encountered, I mean they did have time to adapt, the legislation was published in good*
20
21
22 *time to allow them to understand exactly what they would be required to do” – Trade*
23
24
25
26
27 *association*
28
29
30
31
32
33

34 However, participants also stated that a lack of understanding and consultation from
35
36 government meant a 'true' level playing field for all sectors involved in the sales of sugary
37
38 drinks had not been not achieved *“...you want to really do it smartly so everybody feels*
39
40
41 *they're 100% equally affected and you don't get this... 'my product is in scope, your product*
42
43
44 *is out of scope'...it doesn't create the sense of unilateral 'let's do this'... which is what it*
45
46
47 *should be, if that makes sense” – Food and drink manufacturer. The lack of consultation by*
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49
50
51 the government with sectors who were not soft drinks manufacturers (for example out of
52
53
54 home retailers) and the exclusion of milk-based sugary drinks led to this perception *“...milk-*
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4 *based drinks often carried bigger serving sizes and had more total sugar in them than any of*
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6
7 *our products would. They were excluded from the levy as well which looked like a big*
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9
10 *shortcoming.” Drink manufacturer.*
11
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16

17 ***Milk-based drinks increased the complexity in the out-of-home sector***
18

19
20 Interviewees explained that, from their perspective, the government did not think clearly
21
22
23 about the technical implications for retailers and out-of-home sector and that it was easier for
24
25
26 soft drink manufacturers to respond to the levy than it was for other industry actors “...I
27
28
29 *don’t think they understood the ways of working and the preparation methods in the out-of-*
30
31
32
33 *home sector...*” – *Out-of-home food and drink manufacturer.* A high level of complexity
34
35
36 within the out-of-home sector to manufacture and produce drinks for immediate consumption
37
38
39 led to higher implementation costs; specifically, the exclusion of milk-based drinks and
40
41
42
43 specification around eligibility of drinks mixed with carbon dioxide, water and ice, and those
44
45
46 with and without milk. “...they were looking at the likes of drinks fountains for carbonated
47
48
49 *soft drinks because... a bag and box syrup, they would be mixed with ice or carbon dioxide*
50
51
52
53 *to give the carbonation or either they could be mixed with water and that would capture those*
54
55
56
57 *drinks in the out-of-home sector, but there was a vagueness to milk-based drinks” – Out-of-*
58
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4 *home food and drink manufacturer*. Some queries to Her Majesty's Revenue and Customs
5
6
7 (HMRC – the tax collecting authority in the UK) went unanswered, thus, the out-of-home
8
9
10 sector had to interpret the legislation themselves and apply the SDIL according to their
11
12
13 interpretation. Representatives of the out-of-home sector did not perceive two years as
14
15
16 enough time to have prepared due to confusion surrounding eligibility. In contrast, soft drinks
17
18
19 manufacturers stated they had had time to prepare.
20
21
22
23
24
25
26

27 ***Challenges for supermarkets with large product portfolios***

28
29
30 Supermarkets felt disadvantaged compared to soft drink manufacturers by the complexities of
31
32
33 their sector. They highlighted sector-specific challenges to adapting to the SDIL, including
34
35
36 that their product portfolio not only contains branded drinks, about which they have to make
37
38
39 decisions, but also private label (own brand) drinks “...*what branded suppliers chose to do*
40
41
42 *was their choice...different brands choosing to reformulate, resize or inflate, which I think*
43
44
45 *led to a fair bit of customer confusion as to what the hell was going on.* “ – Supermarket. It
46
47
48 was described as challenging and time consuming to manage such a large portfolio and make
49
50
51 decisions on each product. Particularly as reformulation decisions and portion size reduction
52
53
54 reportedly differed between brands yet had to be merchandised together within stores.
55
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4 Retailers also felt that they were disadvantaged as their customers expressed confusion at
5
6
7 differing responses by different brands – e.g. ‘sugary’ drinks reformulated to just below the
8
9
10 SDIL threshold but containing both sugar and sweeteners confused customers, with queries
11
12
13 directed at retailers rather than drinks manufacturers “... we tried to make it as clear for
14
15
16 customers by putting on all the [shelves] sugar levy applied, so they could very much
17
18
19 see...But... when they see a sugar line that’s not [included in the SDIL], that’s when the
20
21
22 questions start coming.” – Supermarket.
23
24
25
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28
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30 ***Theme 2: Complex to implement but no lasting negative effects***

31 32 33 ***Complexities in strategic response – price and product are key***

34
35
36
37 Industry responded to the SDIL by reviewing product portfolios and strategically selecting
38
39
40 responses at the individual product level. This portfolio review approach is why responses
41
42
43 differed between companies and between products. Research and development (R&D) and
44
45
46 consumer testing were costly for industry during this process, and, linking to theme 1, there
47
48
49 were increased costs for those companies with larger product portfolios (e.g. supermarkets).
50
51
52
53 For the out-of-home sector, additional complications were noted due to confusion over
54
55
56 eligibility of some milk-based drinks “...government is very keen to always say “oh just
57
58
59
60

1
2
3
4 *reformulate, it will be easy” but it’s not easy. It actually takes a lot of time and investment.” –*
5
6

7 *Drink manufacturer.*
8
9
10
11
12

13 Consumer testing was vital during the reformulation and decision-making process and
14
15
16
17 consumer preference dictated the strategy taken “... *we invested a significant amount of*
18
19
20 *money...in developing lots and lots of different formulations with lower sugar to see and*
21
22
23 *testing them with consumers in Great Britain to see whether those recipes... would be*
24
25
26 *acceptable to consumers.” – Drink manufacturer. An additional challenge in reformulating*
27
28
29
30 drinks described by manufacturers was that sugar serves a functional purpose, in the
31
32
33
34 mouthfeel of drinks mixed with ice and to prevent ‘brain freeze’, as well as to provide
35
36
37 sweetness “*Because, actually, yes, we could stick sweeteners in everything, but, actually,*
38
39
40 *sugar also has like a functional role” – Out-of-home retailer.*
41
42
43
44
45
46

47 Packaging, merchandising and placement were challenges to overcome, particularly for
48
49
50 supermarkets. Decisions were made on own brand products but also on how to retail other
51
52
53
54 branded products with different responses to the SDIL (e.g. reformulated drinks, reduced and
55
56
57 increased portion sizes, rebranding) “...*there were a number of products that didn’t*
58
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4 *reformulate but did drop size. So, again, there's just small considerations in that around how*
5
6
7 *you merchandise it... So what sounds like a relatively simple change, of dropping from*
8
9
10 *330ml to, I don't know, 250ml, in reality kind of that complexity flows back through the*
11
12
13
14 *value chain" – Supermarket.*

Leadership buy-in dictates strategic response

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23 Leadership buy-in to health, where senior management 'buy-in' to the idea that their
24
25
26
27 company should be making pro-health decisions, was discussed as vital in dictating the
28
29
30 strategic response to the SDIL "... I think such a review requires strong leadership and ... our
31
32
33
34 *COO was very clear that we needed to step in and we needed to do, you know, do the*
35
36
37 *responsible, brave thing." -Drink manufacturer. Participants described this buy-in as making*
38
39
40 the process simpler and a lack of buy-in as a barrier to making timely progress "... having
41
42
43 *that strong leadership and, you know, complete buy-in from the top team and actually pretty*
44
45
46
47 *much all the other levels of the organisation, then it's actually quite simple" – Drink*
48
49
50 *manufacturer.*

Global companies and internal systems

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3
4 The cost of setting up internal systems to account for and pay the SDIL was expensive, due to
5
6
7 the requirement to report to HMRC, regardless of whether or not a company involved in the
8
9
10 manufacture or selling of soft drinks was liable to pay the levy “...*It’s ridiculous that, you*
11
12
13 *know, it’s cost us half a million pounds just to tell Treasury that actually we don’t need to*
14
15
16 *pay it.*” – *Drink manufacturer.* The global nature of many of these companies was an
17
18
19 additional challenge. Response strategies appropriate for a UK market may not be
20
21
22 transferable to other countries, for example reformulation recipes vary due to differences in
23
24
25 consumer palate and storage temperatures/facilities “...*that’s [computer system] for the UK,*
26
27
28 *and then Ireland have a separate system, France have a separate system, Mexico have a*
29
30
31 *separate system.* “ – *Food and drink manufacturer.*

40 ***Contradictory government messaging***

41
42
43 There was confusion over whether manufacturers needed to pass on price increases to change
44
45
46 consumer behaviour due to contradictory government messaging over the aim of the SDIL.
47
48
49 Participants indicated that they thought price increases should have been passed on to target
50
51
52 individual behaviour change; however, manufacturers stated they had no control over
53
54
55 whether this occurred as retailers set the price for consumers “...*[the] government had*
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1
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3
4 *slightly mixed messages so it was pretty clear from the Department of Health and PHE*

5
6
7 [Public Health England] ... *that they expected to see prices passed on ... I think the Treasury*
8
9
10 *were trying to say, oh soft drinks manufacturers don't have to pass this on... Well, apart from*
11
12
13 *the fact that most businesses won't absorb a cost if they can avoid it for obvious reasons, it*
14
15
16
17 *was the opposite of what the Health Department and others wanted...* – *Drink manufacturer.*

18
19
20
21
22
23
24 ***Few long-lasting negative effects & SDIL provided opportunities***

25
26
27 Participants acknowledged that the SDIL did achieve its aim in stimulating product
28
29
30 reformulation to avoid the levy. Although implementation was complex and costly, as
31
32
33 previously illustrated, there were few long-lasting negative effects. Some participants
34
35
36 suggested the SDIL provided opportunities *"I think some of them would have switched back*
37
38
39 *but we've gained new consumers as well which is, you know, how we, which through*
40
41
42 *sampling and advertising essentially."* – *Drink manufacturer.* However, participants were
43
44
45
46
47 sceptical that the SDIL would achieve intended reductions in childhood obesity in the UK.
48
49
50
51 *"... why [the SDIL] it was thought that that would be a, that policy in isolation would be*
52
53
54 *sufficient to reduce obesity rates."* – *Drink manufacturer.*

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3
4 ***Theme 3: Why us? – The SDIL unfairly targets the drinks industry***
5

6
7 ***Sugary drinks in isolation were unfair targets for regulation***
8
9

10 Participants felt that the SDIL unfairly targets the soft drinks industry. Participants expressed
11
12 their frustration that a single food category was targeted when other food categories bear a
13
14 significant proportion of the responsibility for childhood obesity. They expressed the view
15
16 that multiple nutrients or calories across many food and drink sectors should be targeted by
17
18 regulation if the government is serious about reducing childhood obesity, particularly as
19
20 substitution to other non-regulated food categories could negate the impact of the SDIL on
21
22 health "...why would it be just the soft drink levy, why would you not target cakes and
23
24 biscuits...that's what we didn't understand at the time." - Food and drink manufacturer..
25
26
27
28
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39

40 There was consensus among participants that it did not make sense for the government to
41
42 target a category that they considered was already reducing sugar faster than other food
43
44 categories. Although the SDIL had accelerated the reformulation progress for some, this was
45
46 stated to be already occurring prior to the SDIL announcement. Participants expressed the
47
48 view that the sector had been unfairly penalised, and that sectors which reformulate should be
49
50 praised rather than targeted by regulation when other unregulated categories have contributed
51
52
53
54
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56
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1
2
3 little towards achieving health goals. "... *the soft drinks category was already well embarked*
4
5
6
7 *on the journey to reformulation...part of the industry's disappointment and frustration about*
8
9
10 *the announcement of the levy was that they were already absolutely going to deliver what the*
11
12
13 *levy has now kind of made them deliver"* – Trade association

Distrust of government's motivations to introduce the SDIL

23 Participants stated that the SDIL was politically motivated, not an evidence-based policy.

26 Government policies targeting obesity were described as contradictory and not aligned with

29 one another, particularly the proposed ban on advertising of less healthy foods on TV and

32 online [36]. According to participants, the advertising ban does not distinguish between

35 reformulated and non-reformulated products, and acts as a disincentive to spending on

38 reformulation if they cannot recoup their investment through advertising new products. "*So if*

41 *you can take something from 40g of sugar to 20g of sugar but you'd only advertise on TV is*

44 *it's 5(g), then why bother, right, and it also means that they can't tell the world, look at this*

47 *amazing thing we've done, we've reformulated this"* – Advertising consultant.

1
2
3 Perceived disconnectedness between policies led to distrust in the government and a belief
4
5
6
7 that government obesity policy is poorly planned. Distrust was compounded by some
8
9
10 companies appearing to be successful at lobbying the government following the
11
12
13 announcement, resulting in changes to the regulations as a result of this lobbying, rather than
14
15
16 on the basis of health or nutrition, in particular the decision to exclude milk-based drinks.

17
18
19
20 Participants stated this was motivated by some companies being able to gain a competitive
21
22
23 advantage, as some milk-based drinks have higher sugar content than soft drinks. Participants
24
25
26 also referred to the SDIL as a political tool to distract from other things in the budget in
27
28
29 which it was announced "... *I think this was a decision taken within the Treasury by quite a*
30
31
32
33 *small group of people and it was announced during a Budget by a Chancellor who was trying*
34
35
36 *to distract from some other economic figures that he maybe wasn't too pleased about.*" –

37
38
39
40 *Drink manufacturer.* The fact that the proposal to establish the SDIL had been kept secret,
41
42
43 and the announcement was a shock to many, led to this view. "*I think the timing was a*
44
45
46 *surprise... Yeah and the way it was done without any form of consultation or pre-*
47
48
49 *announcement.*" – *Drink manufacturer.*

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57 ***Theme 4: Consumer is king***
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Consumer response to product changes resulting from the SDIL

Industry participants discussed throughout all previous themes that meeting the wishes of consumers was the priority when responding to the SDIL. Taste preferences and tolerance of reformulation changes were critical and companies expressed concerns that consumers might dislike reformulated products if they changed dramatically in a short time period "... obviously what's critical from our perspective is developing a product that consumers still like the taste of whilst reducing their sugar intake so that we were trying to marry-up those two things." – Drink manufacturer. Company responses to the SDIL, as well as health and environmental issues more broadly, were vital to maintaining brand loyalty and company reputation in the eyes of consumers. The media were seen as influential in shaping consumer preferences and company reputation, as some newspapers had used graphics to show the sugar content of drinks and this was considered to have influenced purchasing patterns. According to informants a small group of very loyal consumers can cause a backlash publicly, which can be picked up by both the news media and social media.

Consumer momentum towards healthier products

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2
3
4 Participants stated consumer purchasing patterns are changing, with consumers increasingly
5
6
7 choosing lower sugar products, which may also have driven reformulation prior to the SDIL.
8
9

10 The policy acted as a catalyst for increasing consumer demand for sugar reduction and some
11
12
13 respondents also highlighted the role of social media in driving these trends. Consumers were
14
15
16 also reported by participants as “moving away from” artificial ingredients, which leads to
17
18
19 challenges in reformulation using non-nutritive sweeteners *"A lot of our consumers like ..., ,*
20
21
22
23 *they don't want to have sweeteners, they don't want to have preservatives" – Drink*
24
25
26 *manufacturer.* Some participants suggested that consumers were not lost when sugar was
27
28
29 reduced in their favourite products, due to consumer preferences moving towards prioritising
30
31
32 health. It was important to participants and their organisations that consumers have enough
33
34
35 choice and there were concerns that regulation could limit choice from some.
36
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44 ***Theme 5: The future of the SDIL***

45
46
47 Participants discussed the potential of expanding the SDIL to fruit and milk-based drinks, the
48
49
50 wider threat to other products, reformulation in other categories, changes in other sectors as a
51
52
53 result of the SDIL and the possibility of its reversal by government.
54
55
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Extending to milk and fruit-based drinks

Concerns were expressed over the Chancellor's proposal to extend the SDIL to milk-based and fruit-based drinks at the time of the announcement *"I don't think politicians think it's done. Obviously we've got the review next year on whether milk-based drinks should be included, and then I think it's 2021 when they'll review the levels as well."* – Drink manufacturer. Participants stated the nutritional benefits of these meant that natural sugars (fructose and lactose) should not be subject to the same regulation as soft drinks. The vitamin and mineral content of these drinks was also discussed as a benefit to children who may not be consuming sufficient fruit, vegetables or calcium from other sources *"... Now you have products that are being developed with high levels of sugar in them so that really does need to be addressed but you don't want to go down the route of demonising milk because it is still a great source of nutrition."* – Out-of-home food and drink manufacturer. Reformulation of these drinks was considered particularly challenging, as naturally occurring sugars cannot be removed in the same way as added sugars in soft drinks.

Impact on the wider food and drink industry and in other sectors

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2
3
4 A wider threat to other products, particularly those included in the PHE Sugar Reduction
5
6
7 Strategy [37] (another element of the Childhood Obesity Plan that encouraged voluntary
8
9
10 industry reformulation) was discussed. The SDIL demonstrated that the government was
11
12
13 willing to implement policy to regulate the food industry in a way that has not been done
14
15
16 before. Food and drink companies discussed their companies' attempts to reformulate
17
18
19 products not included in the SDIL. The SDIL was described as a rallying call for industry to
20
21
22 improve the healthfulness of products. It was also perceived to cause a ripple effect not just
23
24
25 regarding health but also sustainability, environment, media and promotions. *"Yeah, I think*
26
27
28 *there is a ripple effect. So, I think it can be both positive and negative. I think in terms of*
29
30
31 *positive, I think it can force companies to reformulate and be more innovative in driving the*
32
33
34 *use of other ways of sweetening products" - Food and drink manufacturer*
35
36
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Proposal to reverse the SDIL

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46
47 Comments made by Boris Johnson in his leadership campaign to become prime minister
48
49
50 (July 2019), suggested he might consider repealing the SDIL [38]. These were not taken well
51
52
53 by some participants; who indicated that companies had invested heavily in implementing the
54
55
56 levy *"I suppose it does feel like a backtrack [reversing the SDIL]. Like we've made all this*
57
58
59
60

1
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3
4 *work and it was at the time quite painful in the sense of it was such a massive change through*
5
6
7 *the supply chain so there was so many things to think about" – Out-of-home food and drink*
8
9
10 *manufacturer.* However, some participants suggested that reversing the SDIL would be well
11
12
13 tolerated. *"I think, yeah, the industry would be happy to see the back of it because it's just*
14
15
16 *cumbersome, it's just something, it's just another thing to administer." - Food and drink*
17
18
19 *manufacturer.*

27 Discussion

30 Summary

31
32
33 Senior industry perspectives on the SDIL are described in five main themes. Theme 1: *A*
34
35
36 *level playing field...for some*, Theme 2: *Complex to implement, but no lasting negatives*,
37
38
39
40 Theme 3: *Why us? – the SDIL unfairly targets the drinks industry*, Theme 4: *The consumer is*
41
42
43 *king*, and Theme 5: *The future of the SDIL*. The SDIL appeared to create a level playing field
44
45
46
47 which industry accepted, however, this was perceived as inadequate due to the exclusion of
48
49
50 milk-based drinks and targeting only SSBs, giving some a competitive advantage.
51
52
53
54 Implementation of the SDIL was time consuming and complex, leading to high financial
55
56
57 investment to prepare for it. Strategic response to the SDIL was dependent on leadership buy-
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4 in and particularly governed by potential consumer responses to product changes associated
5
6
7 with the policy. The announcement and subsequent implementation of the SDIL caused a
8
9
10 ripple effect beyond the soft drinks industry. The wider food and drink industry perceived it
11
12
13 as evidence of the government being willing to regulate to help achieve health goals.
14
15
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18
19

20 *Strengths and limitations*

21
22
23 The use of elite interviewing techniques to build relationships with and solicit meaningful
24
25
26 responses from participants is a strength of this work. These techniques allowed us to obtain
27
28
29 the views of senior professionals from commercial organisations who have often been
30
31
32 difficult to recruit to other studies [39]. As evident from the challenges described in the out-
33
34
35 of-home sector and supermarkets, including respondents outside of manufacturing allowed
36
37
38 wider exploration of the systemic impacts of the SDIL. A limitation of this work, however, is
39
40
41 that interviews were carried out over a long period of time due to challenges in recruitment.
42
43
44
45 Therefore, not all participants experienced the same political context, such as Boris Johnson's
46
47
48 threats to reverse the SDIL in July 2019. Initial plans were for longitudinal data collection
49
50
51 repeated across the time period of the study. Had all participants been interviewed closer to
52
53
54 the implementation of the SDIL in 2018, then repeated in 2020, perspectives on the political
55
56
57
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1
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3
4 events occurring would have been captured from all participants. Unfortunately, challenges to
5
6
7 recruitment and access to elite participants led to the abandonment of this plan. Although
8
9
10 researcher neutrality was expressed to participants the position of interviewers as public
11
12
13 health academics could have led to these recruitment challenges.
14

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16
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18
19
20 The positionality of the researchers may also have led to censoring of responses by some
21
22
23 participants. Whilst we sought to descriptively represent industry perspectives, as well as
24
25
26 acknowledge our own biases that are typically pro-health policy, it is important to
27
28
29 acknowledge that the food and drink industry will have their own biases against health policy
30
31
32 that is detrimental to their business survival, as evidenced in previous work [40,41]. Although
33
34
35 it was not the aim of the work to explore participant responses in relation to the commercial
36
37
38 determinants of health, it is possible that participant responses did not represent the reality of
39
40
41 what occurred behind the scenes in the food and drink industry in relation to the SDIL.
42
43
44

45
46
47 Overlap between some of the responses provided in this work and the 'typical' responses
48
49
50 explored by other researchers as an industry 'playbook' [42] may support this assertion.
51
52
53

54 55 56 57 *Interpretation and implications* 58 59 60

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2
3
4 Interviewees reported that the technical aspects of drink production, particularly in the out-of-
5
6
7 home sector, were not adequately accounted for in the design of the SDIL. An unintended
8
9
10 consequence of the milk-based drink exclusion, led to some organisations having to interpret
11
12
13 the particulars of the SDIL whilst their queries to HMRC went unanswered. Experiences of
14
15
16 participants in this work align with findings that UK Government policy is set up poorly for
17
18
19 the purposes of adequate monitoring and evaluation [43]. Future policy should engage with
20
21
22 the wider food and beverage sector once a policy is certain to be implemented, to design and
23
24
25 communicate technicalities in ways that avoid industry having to interpret themselves what is
26
27
28 required and provide timely responses to queries surrounding implementation. Further,
29
30
31 respondents indicated that lobbying against the inclusion of milk-based sugar sweetened
32
33
34 beverages in the SDIL resulted in this exclusion. Alongside policy engagement in the
35
36
37 technicalities of production, an avenue for future research would be to understand in more
38
39
40 detail the policy process surrounding the SDIL, particularly the influence of the food and
41
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54 Reviewing their product portfolio was also discussed, where assessments of the product mix
55
56
57 as a whole and by individual product were conducted when determining the response to the
58
59
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1
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3
4 SDIL. This aligns with previous findings that soft drink companies monitor their internal and
5
6
7 external contexts to determine their products' market position in response to a stimulus such
8
9
10 as the SDIL, and then respond with marketing or non-marketing activity to influence the
11
12
13 purchasing of soft drinks [44]. A crucial external contextual component to response in our
14
15
16 findings appears to be consumer response and preferences towards each product, as well as
17
18
19 health as a whole.
20
21
22
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25
26

27 The UK soft drinks industry was reformulating products to lower sugar alternatives several
28
29 years before the SDIL was introduced [44,45]. Perspectives expressed by participants align
30
31
32 with this and suggest that there is a shift towards healthier drinks as the primary offer for
33
34
35 consumers, with the SDIL accelerating the pace of this change. Consumer preferences for
36
37
38 healthier products, and our finding that industry prioritises these health preferences in their
39
40
41 decision making, are likely to have triggered the soft drinks industry to reformulate products
42
43
44 prior to the announcement of the SDIL. The advocacy (e.g. Jamie Oliver and Action on
45
46
47 Sugar) in the early 2010s [46–48] and government threats to regulate industry [49] may have
48
49
50 also increased consumer awareness about the health impact of sugar consumption and had a
51
52
53
54
55
56
57 'signalling effect' to consumers to reduce their sugar consumption [50]. Participants in our
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60

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3
4 study suggested that the SDIL was adopted by the Government because of the existing
5
6
7 popularity of sugar reduction among the public. It is likely that the UK public was aware that
8
9
10 SSBs harm health much earlier than the policy announcement, resulting from media activity,
11
12
13 such as that related to Jamie Oliver's campaigning [46] PHE's [47] and WHO's reports on
14
15
16 sugar [48]. Therefore, the importance of public momentum towards health could be regarded
17
18
19 as a trigger for industry action independently from encouraging government action via policy.
20
21
22
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26

27 Finally, participants expressed concern that policies introduced to combat obesity and other
28
29
30 societal issues should be complementary not contradictory. The proposed ban on TV and
31
32
33 online advertising of high fat, salt and sugar (HFSS) products by the UK Government [36]
34
35
36 was viewed by industry to be misguided as they stated it may stop them being able to
37
38
39 advertise their reformulated products; not just those impacted by the SDIL but products
40
41
42 voluntarily reformulated which would still be classified as HFSS. Stakeholder requests for
43
44
45 consistency across policy areas was also expressed by interviewees regarding this advertising
46
47
48 ban [51]. This indicates that a more consistent approach to determining which products
49
50
51 government wants industry to change would help ensure policies do not undermine one
52
53
54
55
56
57 another and build trust in government amongst industry.
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Conclusion

This study explored food and drink industry perspectives on the SDIL. We found that industry accepted that legislation was useful in levelling the commercially competitive playing field. However, in practice participants stated that the SDIL had not created a 'true' level playing field as little consideration had been given to excluded product categories during policy design. Technical aspects of implementation were not adequately included and led to complexity for out of home retailers. Legislation on SSBs needs to take account of all industry sectors it affects, including out of home retail, as well as the manufacturing sector. Participants stated that only targeting sugary soft drinks was unfair due to the progress already made in the category compared to others (e.g., confectionary). The critical role of consumers in creating momentum towards sugar reduction in SSBs prior to the SDIL announcement, as well as dictating response to the SDIL was discussed. It is hypothesised that pro-health public views could be a useful lever in encouraging positive industry action independently of food and drink regulation. The impact of the SDIL was felt beyond the soft drinks industry, driving other product sectors to reformulate in anticipation of future regulation.

1
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6
7 **Acknowledgements:** For the purpose of Open Access, the author has applied a Creative
8
9
10 Commons Attribution (CC BY) licence to any Author Accepted Manuscript version arising.
11
12
13
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15
16

17 **Competing Interests:** None
18
19
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21
22

23 **Contributorship Statement:** Dr. Catrin P Jones: Conceptualization, Methodology, Formal
24
25 analysis, Investigation, Data Curation, Writing - Original Draft, Project administration. Dr.
26
27 Hannah Forde: Formal analysis, Writing - Review & Editing. Dr Tarra L. Penney:
28
29 Conceptualization, Methodology, Investigation, Data Curation, Writing - Review & Editing,
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31 Funding acquisition. Dr. Dolly R. Z. Theis: Formal analysis, Writing - Review & Editing
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33 Prof. Steven Cummins: Conceptualization, Methodology, Formal analysis, Writing - Review
34
35 & Editing, Supervision, Funding acquisition. Prof. Jean Adams: Formal analysis, Writing -
36
37 Review & Editing, Funding acquisition. Dr. Cherry Law: Formal analysis, Writing - Review
38
39 & Editing. Prof. Harry Rutter: Formal analysis, Writing - Review & Editing, Funding
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41 acquisition. Prof. Richard Smith: Formal analysis, Writing - Review & Editing, Funding
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1
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3 acquisition. Prof. Martin White: Conceptualization, Methodology, Resources, Supervision,
4
5
6
7 Project administration, Funding acquisition, Formal analysis, Writing - Review & Editing.
8
9
10

11
12
13 **Funding:** This project was funded by the NIHR Public Health Research programme (Grant
14
15
16 Nos. 16/49/01 and 16/130/01). At the time this study was conducted CPJ, MW, ELR, HF,
17
18
19 TLP, DT, JA, OA, SA, were also supported in part by: Programme grants to the MRC
20
21
22 Epidemiology Unit from the Medical Research Council (grant No. MC_UU_12015/6 and
23
24
25 MC_UU_00006/7); and the Centre for Diet and Activity Research (CEDAR), a UKCRC
26
27
28
29 Public Health Research Centre of Excellence – funding from the British Heart Foundation,
30
31
32
33 Cancer Research UK, the Economic and Social Research Council, the Medical Research
34
35
36
37 Council, the National Institute for Health Research, and the Wellcome Trust, under the
38
39
40 auspices of the UK Clinical Research Collaboration is gratefully acknowledged. HF received
41
42
43
44 funding for her PhD studentship from the Economic and Social Research Council and Public
45
46
47
48 Health England, and she has received further discretionary funding from the Economic and
49
50
51 Social Research Council and Murray Edwards College, Cambridge. The views expressed are
52
53
54 those of the authors and not necessarily those of the any of the above-named funders. The
55
56
57
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1
2
3 funders had no role in study design, data collection and analysis, decision to publish, or
4
5
6
7 preparation of the manuscript.
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14 **Data sharing statement:** The lead author has full access to the data reported in the manuscript.
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21 **Ethics approval statement:** The study was approved by the Humanities and Social Science
22
23
24 Ethics Committee at the University of Cambridge, UK. No approval ID was provided by this
25
26
27 committee.
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For peer review only

BMJ Open

Industry views of the UK Soft Drinks Industry Levy: a thematic analysis of elite interviews with food and drink industry professionals, 2018-20

Journal:	<i>BMJ Open</i>
Manuscript ID	bmjopen-2023-072223.R2
Article Type:	Original research
Date Submitted by the Author:	06-Jul-2023
Complete List of Authors:	Jones, Catrin; University of Cambridge, MRC Epidemiology Unit Forde, Hannah; University of Cambridge, MRC Epidemiology Unit; University of Oxford, Nuffield Department of Primary Care Health Sciences Penney, Tarra; York University, Global Food System and Policy Research, School of Global Health, Faculty of Health Theis, Dolly; University of Cambridge, MRC Epidemiology Unit Cummins, Steven; London School of Hygiene & Tropical Medicine, Population Health Innovation Lab, Department of Public Health, Environments & Society, Faculty of Public Health and Policy Adams, J; University of Cambridge, MRC Epidemiology Unit Law, Cherry; University of Reading, Department of Agri-Food Economics and Marketing Rutter, Harry; University of Bath Department of Social and Policy Sciences, Social and Policy Sciences Smith, Richard ; University of Exeter, Faculty of Health and Life Sciences White, Martin; University of Cambridge, MRC Epidemiology Unit
Primary Subject Heading:	Health policy
Secondary Subject Heading:	Qualitative research
Keywords:	Health policy < HEALTH SERVICES ADMINISTRATION & MANAGEMENT, Public health < INFECTIOUS DISEASES, QUALITATIVE RESEARCH

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3 **Industry views of the UK Soft Drinks Industry Levy: a thematic analysis of elite interviews**
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7 **with food and drink industry professionals, 2018-20**
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26 **Keywords:** Soft drinks, Soft drinks industry levy, Food and drink industry, sugar sweetened
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36 **Word count:** 6550
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43 Abstract

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46 **Introduction:** The UK Soft Drinks Industry Levy (SDIL), implemented in 2018, has been
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49 successful in reducing the sugar content, and purchasing, of soft drinks, with limited financial
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52 impact on industry. Understanding the views of food and drink industry professionals
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55 involved in reacting to the SDIL is important for policymaking. However, their perceptions
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58 of the challenges of implementation and strategic responses are unknown. The aim of this
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4 study therefore was to explore how senior food and drink industry professionals viewed the
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7 **SDIL. *Methods and analysis:*** We undertook a qualitative descriptive study using elite
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10 interviews with 14 senior professionals working in the food and drink industry. Braun and
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13 Clarke's approach to thematic analysis was used to analyse the data, taking an inductive
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16 exploratory and descriptive approach not informed by prior theory or frameworks. Five main
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19 themes were identified: *(1) A level playing field...for some*; Industry accepted the SDIL as
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22 an attempt to create a level playing field but due to the exclusion of milk-based drinks, this
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25 was viewed as inadequate. *(2) Complex to implement, but no lasting negatives*; The SDIL
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28 was complex, expensive and time consuming to implement, with industry responses
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31 dependent on leadership buy-in. *"(3) Why us? – the SDIL unfairly targets the drinks*
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34 *industry"*; soft drinks are an unfair target when other categories also contain high sugar. *"(4)*
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37 *The consumer is king"*; Consumers were a key focus of the industry response to this policy.
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44 *"(5) The future of the SDIL"*; There appeared to be a wider ripple effect, which primed
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47 industry to prepare for future regulation in support of health and environmental sustainability.
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51 ***Ethics and dissemination:*** The study was approved by the Humanities and Social Science
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54 Ethics Committee at the University of Cambridge, UK.
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Strengths and Limitations

- This qualitative study explored how senior food and drink industry professionals viewed the SDIL.
- We undertook elite interviews with 14 professionals working in the food and drink industry, who have often been difficult to recruit in other studies.
- Braun and Clarke's thematic analysis taking a descriptive approach was used to analyse the data.
- Elite interviewing methods allow for the building of relationships to elicit meaningful responses from participants.
- Insights from senior food and drink industry professionals illustrate how sugar sweetened beverage taxes might be successfully implemented and improve understanding of industry responses to taxes and other food and drink policies.

Introduction

Diet-related non-communicable diseases are a major and growing problem, responsible for over 11 million deaths globally each year [1]. Sugar consumption is of particular concern, with the World Health Organization (WHO) recommending member states introduce sugar-sweetened beverage (SSB) taxes [2]. Reviews suggest that they reduce sales of, increase prices of and encourage reformulation of SSBs [3–5] and over 100 SSB taxes have been implemented worldwide covering 52% of the world's population [6]. SSB taxes have a variety of designs with 87% excise taxes [6]. The WHO recommend that a tiered SSB tax be introduced in countries with high administrative capacity, similar to that which has been introduced in the UK [2]. The Soft Drinks Industry Levy (SDIL) was announced on 16th March 2016 and implemented in the United Kingdom (UK) on 6th April 2018. According to the budget speech by George Osborne, Chancellor of the Exchequer at the time, it was designed to incentivise manufacturers of SSBs to reformulate their products [7] via charging a levy on soft drinks produced by companies when they leave the warehouse or when imported into the country [8]. Integrated in August 2016 as part of the UK Government's Childhood Obesity: A Plan For Action [9], the SDIL consists of two tiers (for particulars of the tax see box 1). A public consultation on the proposals between August - October 2016 set

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4 out the plans for the tiers and exclusions as described in Box 1. Few changes were made as a
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7 result of this consultation and the SDIL was given royal assent on 27th April 2017. The
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10 Government published a second chapter of its childhood obesity plan in 2018, which
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13 suggested the SDIL may be extended to milk-based drinks, though this has not yet occurred
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34 **Box 1: Soft Drinks Industry Levy Particulars [7]**

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37 **Eligible drinks:**

- 38 • ≥ 8 g total sugar per 100 mL charged at 24 pence per litre
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- 40 • ≥ 5 g and < 8 g total sugar per 100 mL charged at 18 pence per litre
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47 **Exemptions:**

- 48 • Drinks containing more than 75% milk or 1.2% alcohol
- 49
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- 51 • Alcohol substitute drinks
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- 56 • Powdered drinks
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- 100% fruit juices
- Manufacturers selling under one million litres of drinks per year[11]

The SDIL was one of the first SSB fiscal interventions explicitly designed to incentivise reformulation [7,12,13]. This aim was largely achieved, substantially reducing overall SSB sugar content, and inducing a major shift of drinks from the higher levy tier to the lower tier and untaxed bracket between 2016 and 2018 (Scarborough et al., 2020). Reformulation is reflected in purchases of sugar from SSBs, with [14]. Prior to implementation of the SDIL, the food and drinks industry (hereafter referred to as ‘industry’) viewed the SDIL as having a potentially negative impact on profits resulting in job losses [15–17]. A negative stock market reaction to the SDIL announcement was observed, but this only lasted two days [18]. Similarly, a negative impact on company domestic turnover was observed following the announcement of the SDIL, but this resolved by the time of its implementation [19].

Critical to the success of the SDIL is the implementation of and reaction to the regulations by the drink industry. Therefore, it is important to understand perspectives of the industry as well as those who work in it regarding the implementation of such taxes. Previous work has

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3 investigated industry perspectives of the SDIL expressed through the news media [15,20–23]
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7 and the views of industry, civil society and academic participants on how marketing changed
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10 in response to the SDIL [24]. A notable gap in the literature, however, is perspectives of the
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13 SDIL from the commercial sector, not communicated publicly through news media nor
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16 focused solely on marketing responses. Important learning can be obtained by exploring the
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19 perspectives of commercial actors involved in responding to regulation. Interviews with
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23 senior members of industry can help examine the impact of the SDIL on both the soft drinks
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26 industry and wider food and drink industry, an avenue not previously explored. This study
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29 therefore aimed to address these knowledge gaps and inform policymaking by exploring the
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32 perspectives of senior industry professionals regarding the UK SDIL.
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41 **Methods**

42 43 *Study Design*

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46 This study adopted a qualitative descriptive design involving elite interviews with senior
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49 industry professionals.
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57 *Methodological Orientation*

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4 This research took an experiential qualitative approach, within a critical realist position.
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7 Participant perspectives and perceptions were prized over researcher interpretations, and
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10 reality was derived from our participants' words and meaning, rather than a reality
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13 constructed through researchers' interpretation of their words [25]. A descriptive approach
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16 was used to explore how the SDIL was viewed from the position of our participants.
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23 ***Research Team***

24 Prof Martin White (MW), Prof Steven Cummins (SC), Prof Jean Adams (JA), Prof Rich
25
26

27 Smith (RS) and Prof Harry Rutter (HR) secured funding for the overall evaluation of the
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29

30 SDIL within which this study formed a part [26]. Interviews were conducted by Postdoctoral
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33 Research Associates Dr. Tarra L Penney (TLP) and Dr. Catrin P Jones (CPJ). TLP led the
34
35

36 design of data collection and CPJ led the design of the analysis. MW & SC provided
37
38

39 guidance on the design of both elements. TLP and CPJ recruited and interviewed participants.
40
41

42 CPJ led the analysis with support from Dr Hannah Forde (HF). HF conducted secondary
43
44

45 coding to support theme generation and interpretation. All authors previously mentioned, as
46
47

48 well as Dr Dolly Theis (DT) and Dr Cherry Law (CL) were involved in data analysis and
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50

51 interpretation, as well as drafting this manuscript.
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Participants

Senior professionals from the soft drinks, food and other drinks industries were recruited to this study using purposive and snowball sampling. We adopted 'elite interviewing' methods to maximise involvement of senior professionals in positions of influence within their organisation and with high levels of responsibility [27]. This technique provides a series of strategies to support recruitment of difficult to access key participants, and to ensure the validity and reliability of data [28]. The principles of elite interviewing were used to inform recruitment including stronger emphasis on the maintenance of trust, importance of interview tone of the interview, preparing appropriately, and engaging in and tailoring dialogue relevant to each informant, more so than in traditional interviews [29,30].

Individuals were considered eligible to participate based on the following criteria: a) currently or previously held a high-level industry position (at the managerial, director or chief officer level), b) their organisation and their professional role was directly or indirectly impacted by the SDIL and c) they could provide a novel perspective, determined by their job role or the company they work for not previously heard in our interviews, to ensure a range

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4 of views. Recruitment typically involved an email introduction by a member of the team or
5
6
7 informant contact, although CPJ also attended industry food events and recruited face to face.
8
9

10 Initial contact was followed by an informal telephone conversation with TLP or CPJ to
11
12
13 discuss the research purpose, team and informant interests and perspectives, ultimately
14
15
16 proceeding to full participation via telephone interview.
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23 *Data Collection*

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25
26
27 Telephone interviews were conducted from June 2018 to June 2020. Participant information
28
29
30 sheets were sent to potential participants prior to participating in the informal discussion.
31
32
33 Informed consent was obtained verbally prior to commencement of the formal telephone
34
35
36 interview, which was digitally audio-recorded. Interviews were undertaken using a minimally
37
38
39 structured topic guide containing three broad areas of inquiry: a) Can you tell me about your
40
41
42 role and organization? b) Can you tell me about your sector as a whole? c) What do you
43
44
45 know about the UK Soft Drinks Industry Levy and its impacts? Elite interviewing
46
47
48 necessitates informed and adaptive dialogue [29,31], meaning participants could engage in
49
50
51 ways most relevant to their specific expertise or experiences within these broad areas.
52
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56
57 Interviews were transcribed verbatim by a trusted external company, and transcripts were
58
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3
4 checked against the audio files by CPJ to identify any inaccuracies. Transcripts were
5
6
7 anonymised prior to analysis by removing names of people, organisations, and brands.
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12

13 *Analysis*

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16
17 Analysis commenced once all interviews had been conducted and transcribed. Braun and
18
19
20 Clarke's thematic analysis was used, taking an inductive exploratory and descriptive
21
22
23 approach not informed by any prior theory or framework [32]. This approach is flexible due
24
25
26 to lack of alignment with specific epistemological and ontological stance [33,34]. Six
27
28
29 analytic steps were conducted: 1) familiarisation, 2) data coding, 3) initial theme generation,
30
31
32
33 4) theme development and review, 5) theme refining, defining and naming, 6) writing up.
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39

40 CPJ listened to audio files and read transcripts at least twice to become familiar with them,
41
42
43 whilst making notes on initial impressions and patterns (step 1). Following familiarisation,
44
45
46
47 CPJ worked systematically through the entire data set and conducted complete coding of all
48
49
50 data, in which segments of data were given a label to describe their area of interest. Coding
51
52
53
54 was supported by NVivo software version 12. Semantic codes were derived directly from
55
56
57 participants' speech or codes where phrases of speech were brief enough to be directly coded
58
59
60

1
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4 (step 2). CPJ then sorted these initial codes into concise categories (overarching codes),
5
6
7 which clearly described the content of the data (step 3). A reflective diary was kept
8
9
10 throughout the coding process by CPJ to note reflections on findings and to ensure a data-
11
12
13 driven analytic process. Please see supplementary file 1 for a detailed account of reflexivity.
14
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16

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19
20 HF also familiarised themselves with the transcripts (step 1) and then examined CPJ's coding to
21
22
23 ensure the codes were data driven with as little interpretation as possible (step 2). CPJ then
24
25
26 collated codes that shared a common pattern into themes (step 3). Again, CPJ and HF met to
27
28
29 discuss and refine the themes to ensure they were descriptive with minimal interpretation
30
31
32
33 (step 4).
34
35
36
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39

40 A document containing themes, codes within them, and extensive anonymised quotes was
41
42
43 shared with all co-authors in two phases: phase 1 March 2022 and phase 2 October 2022
44
45
46 (step 5). This data clinic aimed to minimise researcher interpretation. A document presented
47
48
49 theme descriptions and asked co-authors to answer the following questions for each theme: 1)
50
51
52
53 Is the theme descriptive? 2) Does the theme represent the data accurately? 3) What do you
54
55
56 think the theme tells us about the SDIL from the perspective of industry? JA, DT, CL
57
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1
2
3 completed the data clinic document in phase 1. Themes were amended based on their
4
5
6 reflections and the document updated in October 2022. SC, MW, HR & RS completed the
7
8
9 data clinic form in phase 2. Final themes and the manuscript were written up by CPJ and
10
11
12
13 reviewed by all co-authors (step 6).
14
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19

20 *Patient and Public Involvement Statement*

21
22
23 This study is part of the 'Evaluation of the health impacts of the UK Treasury Soft Drinks
24
25
26 Industry Levy (SDIL)' funded by NIHR ([award no. 16/130/01](#)). Project oversight is provided
27
28
29 by an independent study steering committee (ISSC) which contains members of the public.
30
31
32
33 The ISSC for the overall project met biannually from 2017 – 2023 and were asked to provide
34
35
36
37 advice on methodology as well as interpretation of our findings.
38
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44 **Results**

45
46
47 Fourteen participants were recruited (Table 1). Participants' roles within organisations were
48
49
50 diverse; chief officers, directors, and managers with overall responsibility or with specialist
51
52
53 responsibilities for finance, strategy, operations, marketing, public relations or nutrition.
54
55
56
57 Interviews ranged in length from 26 to 62 minutes. Six additional participants were
58
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60

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3 approached and took part in informal discussions; three did not participate due to scheduling
4
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6
7 issues, and three refused to take part. Five inductively derived, interlinked themes and 15
8
9
10 subthemes were identified (Box 2).
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24 Table 1: Participant details
25

Sector Category	N
Drink manufacturers	4
Food and drink manufacturers	3
Supermarkets	3
Industry associations	1
Out-of-home* food and drink manufacturers	1
Out-of-home retailers	1
Advertising consultants	1

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** *“The out-of-home sector is generally considered to be any outlet where food or drink is prepared in a way that means it is ready for immediate consumption, on or off the premises”*[35]

Box 2: Theme and sub-theme summary.

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2
3
4 Theme 1: A level playing field...for some

5 *The SDIL created a level playing field*

6 *Milk-based drinks increased the complexity in the out-of-home sector*

7 *Challenges for supermarkets with large product portfolios*

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10
11 Theme 2: Complex to implement but no lasting negative effects

12 *Complexities in strategic response – price and product are key*

13 *Global companies and internal systems*

14 *Contradictory government messaging*

15 *Leadership buy-in dictates strategic response*

16 *Few long-lasting negative effects & SDIL provided opportunities*

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23 Theme 3: Why us? – The SDIL unfairly targets the drinks industry

24 *Sugary drinks in isolation were unfair targets for regulation*

25 *Distrust of government's motivations to introduce the SDIL*

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28
29 Theme 4: Consumer is king

30 *Consumer response to product changes resulting from the SDIL*

31 *Consumer momentum towards healthier products*

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35 Theme 5: The future of the SDIL

36 *Extending to milk and fruit-based drinks*

37 *Impact on the wider food and drink industry and on other sectors*

38 *Proposal to reverse the SDIL*

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49 ***Theme 1: A level playing field...for some***

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51
52 ***The SDIL created a level playing field***

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54
55 Industry professionals accepted that the SDIL helped create a level playing field, where no

56
57
58 organisation lost out by taking action on health that their competitors did not "... *legislation*

1
2
3
4 *level playing fields is so important and that's why with these big public health*
5
6
7 *initiatives...I'm actually really quite pro government intervention" – Supermarket. Soft*
8
9
10 drinks manufacturers also discussed that the two years to prepare for the implementation of
11
12
13 the SDIL was sufficient and they were happy they could develop an adequate response within
14
15
16 that time. *"I'm not aware of any significant implementation or challenges that our members*
17
18
19 *have encountered, I mean they did have time to adapt, the legislation was published in good*
20
21
22 *time to allow them to understand exactly what they would be required to do" – Trade*
23
24
25
26
27 *association*
28
29
30
31
32
33

34 However, participants also stated that a lack of understanding and consultation from
35
36 government meant a 'true' level playing field for all sectors involved in the sales of sugary
37
38 drinks had not been not achieved *"...you want to really do it smartly so everybody feels*
39
40
41 *they're 100% equally affected and you don't get this... 'my product is in scope, your product*
42
43
44 *is out of scope'...it doesn't create the sense of unilateral 'let's do this'... which is what it*
45
46
47 *should be, if that makes sense" – Food and drink manufacturer. The lack of consultation by*
48
49
50
51 the government with sectors who were not soft drinks manufacturers (for example out of
52
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54 home retailers) and the exclusion of milk-based sugary drinks led to this perception *"...milk-*
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4 *based drinks often carried bigger serving sizes and had more total sugar in them than any of*
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6
7 *our products would. They were excluded from the levy as well which looked like a big*
8
9
10 *shortcoming.” Drink manufacturer.*
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16

17 ***Milk-based drinks increased the complexity in the out-of-home sector***
18

19
20 Interviewees explained that, from their perspective, the government did not think clearly
21
22
23 about the technical implications for retailers and out-of-home sector and that it was easier for
24
25
26 soft drink manufacturers to respond to the levy than it was for other industry actors “...I
27
28
29 *don’t think they understood the ways of working and the preparation methods in the out-of-*
30
31
32
33 *home sector...” – Out-of-home food and drink manufacturer. A high level of complexity*
34
35
36 within the out-of-home sector to manufacture and produce drinks for immediate consumption
37
38
39 led to higher implementation costs; specifically, the exclusion of milk-based drinks and
40
41
42
43 specification around eligibility of drinks mixed with carbon dioxide, water and ice, and those
44
45
46 with and without milk. “...they were looking at the likes of drinks fountains for carbonated
47
48
49 *soft drinks because... a bag and box syrup, they would be mixed with ice or carbon dioxide*
50
51
52
53 *to give the carbonation or either they could be mixed with water and that would capture those*
54
55
56
57 *drinks in the out-of-home sector, but there was a vagueness to milk-based drinks” – Out-of-*
58
59
60

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4 *home food and drink manufacturer*. Some queries to Her Majesty's Revenue and Customs
5
6
7 (HMRC – the tax collecting authority in the UK) went unanswered, thus, the out-of-home
8
9
10 sector had to interpret the legislation themselves and apply the SDIL according to their
11
12
13 interpretation. Representatives of the out-of-home sector did not perceive two years as
14
15
16 enough time to have prepared due to confusion surrounding eligibility. In contrast, soft drinks
17
18
19 manufacturers stated they had had time to prepare.
20
21
22
23
24
25
26

27 ***Challenges for supermarkets with large product portfolios***

28
29
30 Supermarkets felt disadvantaged compared to soft drink manufacturers by the complexities of
31
32
33 their sector. They highlighted sector-specific challenges to adapting to the SDIL, including
34
35
36 that their product portfolio not only contains branded drinks, about which they have to make
37
38
39 decisions, but also private label (own brand) drinks “...*what branded suppliers chose to do*
40
41
42 *was their choice...different brands choosing to reformulate, resize or inflate, which I think*
43
44
45 *led to a fair bit of customer confusion as to what the hell was going on.* “ – Supermarket. It
46
47
48 was described as challenging and time consuming to manage such a large portfolio and make
49
50
51 decisions on each product. Particularly as reformulation decisions and portion size reduction
52
53
54 reportedly differed between brands yet had to be merchandised together within stores.
55
56
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4 Retailers also felt that they were disadvantaged as their customers expressed confusion at
5
6
7 differing responses by different brands – e.g. ‘sugary’ drinks reformulated to just below the
8
9
10 SDIL threshold but containing both sugar and sweeteners confused customers, with queries
11
12
13 directed at retailers rather than drinks manufacturers “... we tried to make it as clear for
14
15
16 customers by putting on all the [shelves] sugar levy applied, so they could very much
17
18
19 see...But... when they see a sugar line that’s not [included in the SDIL], that’s when the
20
21
22 questions start coming.” – Supermarket.
23
24
25

26 27 28 29 30 ***Theme 2: Complex to implement but no lasting negative effects***

31 32 33 ***Complexities in strategic response – price and product are key***

34
35
36 Industry responded to the SDIL by reviewing product portfolios and strategically selecting
37
38
39 responses at the individual product level. This portfolio review approach is why responses
40
41
42 differed between companies and between products. Research and development (R&D) and
43
44
45 consumer testing were costly for industry during this process, and, linking to theme 1, there
46
47
48 were increased costs for those companies with larger product portfolios (e.g. supermarkets).
49
50
51
52
53 For the out-of-home sector, additional complications were noted due to confusion over
54
55
56 eligibility of some milk-based drinks “...government is very keen to always say “oh just
57
58
59
60

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4 *reformulate, it will be easy” but it’s not easy. It actually takes a lot of time and investment.” –*
5
6

7 *Drink manufacturer.*
8
9
10
11
12

13 Consumer testing was vital during the reformulation and decision-making process and
14
15
16
17 consumer preference dictated the strategy taken “... *we invested a significant amount of*
18
19
20 *money...in developing lots and lots of different formulations with lower sugar to see and*
21
22
23 *testing them with consumers in Great Britain to see whether those recipes... would be*
24
25
26 *acceptable to consumers.” – Drink manufacturer. An additional challenge in reformulating*
27
28
29
30 drinks described by manufacturers was that sugar serves a functional purpose, in the
31
32
33
34 mouthfeel of drinks mixed with ice and to prevent ‘brain freeze’, as well as to provide
35
36
37 sweetness “*Because, actually, yes, we could stick sweeteners in everything, but, actually,*
38
39
40 *sugar also has like a functional role” – Out-of-home retailer.*
41
42
43
44
45
46

47 Packaging, merchandising and placement were challenges to overcome, particularly for
48
49
50 supermarkets. Decisions were made on own brand products but also on how to retail other
51
52
53
54 branded products with different responses to the SDIL (e.g. reformulated drinks, reduced and
55
56
57 increased portion sizes, rebranding) “...*there were a number of products that didn’t*
58
59
60

1
2
3 reformulate but did drop size. So, again, there's just small considerations in that around how
4
5
6
7 you merchandise it... So what sounds like a relatively simple change, of dropping from
8
9
10 330ml to, I don't know, 250ml, in reality kind of that complexity flows back through the
11
12
13
14 value chain" – Supermarket.

Leadership buy-in dictates strategic response

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23 Leadership buy-in to health, where senior management 'buy-in' to the idea that their
24
25
26
27 company should be making pro-health decisions, was discussed as vital in dictating the
28
29
30 strategic response to the SDIL "... I think such a review requires strong leadership and ... our
31
32
33
34 COO was very clear that we needed to step in and we needed to do, you know, do the
35
36
37 responsible, brave thing." -Drink manufacturer. Participants described this buy-in as making
38
39
40 the process simpler and a lack of buy-in as a barrier to making timely progress "... having
41
42
43 that strong leadership and, you know, complete buy-in from the top team and actually pretty
44
45
46
47 much all the other levels of the organisation, then it's actually quite simple" – Drink
48
49
50 manufacturer.

Global companies and internal systems

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2
3
4 The cost of setting up internal systems to account for and pay the SDIL was expensive, due to
5
6
7 the requirement to report to HMRC, regardless of whether or not a company involved in the
8
9
10 manufacture or selling of soft drinks was liable to pay the levy “...*It’s ridiculous that, you*
11
12
13 *know, it’s cost us half a million pounds just to tell Treasury that actually we don’t need to*
14
15
16 *pay it.*” – *Drink manufacturer*. The global nature of many of these companies was an
17
18
19 additional challenge. Response strategies appropriate for a UK market may not be
20
21
22 transferable to other countries, for example reformulation recipes vary due to differences in
23
24
25 consumer palate and storage temperatures/facilities “...*that’s [computer system] for the UK,*
26
27
28 *and then Ireland have a separate system, France have a separate system, Mexico have a*
29
30
31 *separate system.* “ – *Food and drink manufacturer*.

40 ***Contradictory government messaging***

41
42
43
44 There was confusion over whether manufacturers needed to pass on price increases to change
45
46
47 consumer behaviour due to contradictory government messaging over the aim of the SDIL.
48
49
50 Participants indicated that they thought price increases should have been passed on to target
51
52
53 individual behaviour change; however, manufacturers stated they had no control over
54
55
56 whether this occurred as retailers set the price for consumers “...*[the] government had*
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4 *slightly mixed messages so it was pretty clear from the Department of Health and PHE*

5
6
7 [Public Health England] ... *that they expected to see prices passed on ... I think the Treasury*
8
9
10 *were trying to say, oh soft drinks manufacturers don't have to pass this on... Well, apart from*
11
12
13 *the fact that most businesses won't absorb a cost if they can avoid it for obvious reasons, it*
14
15
16
17 *was the opposite of what the Health Department and others wanted...* – Drink manufacturer.
18
19

20 21 22 23 ***Few long-lasting negative effects & SDIL provided opportunities***

24
25
26
27 Participants acknowledged that the SDIL did achieve its aim in stimulating product
28
29
30 reformulation to avoid the levy. Although implementation was complex and costly, as
31
32
33 previously illustrated, there were few long-lasting negative effects. Some participants
34
35
36 suggested the SDIL provided opportunities *“I think some of them would have switched back*
37
38
39 *but we've gained new consumers as well which is, you know, how we, which through*
40
41
42 *sampling and advertising essentially.”* – Drink manufacturer. However, participants were
43
44
45
46
47 sceptical that the SDIL would achieve intended reductions in childhood obesity in the UK.
48
49
50
51 *“... why [the SDIL] it was thought that that would be a, that policy in isolation would be*
52
53
54 *sufficient to reduce obesity rates.”* – Drink manufacturer.
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4 ***Theme 3: Why us? – The SDIL unfairly targets the drinks industry***
5

6
7 ***Sugary drinks in isolation were unfair targets for regulation***
8
9

10 Participants felt that the SDIL unfairly targets the soft drinks industry. Participants expressed
11
12 their frustration that a single food category was targeted when other food categories bear a
13
14 significant proportion of the responsibility for childhood obesity. They expressed the view
15
16 that multiple nutrients or calories across many food and drink sectors should be targeted by
17
18 regulation if the government is serious about reducing childhood obesity, particularly as
19
20 substitution to other non-regulated food categories could negate the impact of the SDIL on
21
22 health "...why would it be just the soft drink levy, why would you not target cakes and
23
24 biscuits...that's what we didn't understand at the time." - Food and drink manufacturer..
25
26
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39

40 There was consensus among participants that it did not make sense for the government to
41
42 target a category that they considered was already reducing sugar faster than other food
43
44 categories. Although the SDIL had accelerated the reformulation progress for some, this was
45
46 stated to be already occurring prior to the SDIL announcement. Participants expressed the
47
48 view that the sector had been unfairly penalised, and that sectors which reformulate should be
49
50 praised rather than targeted by regulation when other unregulated categories have contributed
51
52
53
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1
2
3 little towards achieving health goals. "... *the soft drinks category was already well embarked*
4
5
6
7 *on the journey to reformulation...part of the industry's disappointment and frustration about*
8
9
10 *the announcement of the levy was that they were already absolutely going to deliver what the*
11
12
13 *levy has now kind of made them deliver"* – Trade association

Distrust of government's motivations to introduce the SDIL

23 Participants stated that the SDIL was politically motivated, not an evidence-based policy.

26 Government policies targeting obesity were described as contradictory and not aligned with

29 one another, particularly the proposed ban on advertising of less healthy foods on TV and

32 online [36]. According to participants, the advertising ban does not distinguish between

35 reformulated and non-reformulated products, and acts as a disincentive to spending on

38 reformulation if they cannot recoup their investment through advertising new products. "*So if*

41 *you can take something from 40g of sugar to 20g of sugar but you'd only advertise on TV is*

44 *it's 5(g), then why bother, right, and it also means that they can't tell the world, look at this*

47 *amazing thing we've done, we've reformulated this"* – Advertising consultant.

1
2
3 Perceived disconnectedness between policies led to distrust in the government and a belief
4
5
6
7 that government obesity policy is poorly planned. Distrust was compounded by some
8
9
10 companies appearing to be successful at lobbying the government following the
11
12
13 announcement, resulting in changes to the regulations as a result of this lobbying, rather than
14
15
16 on the basis of health or nutrition, in particular the decision to exclude milk-based drinks.

17
18
19
20 Participants stated this was motivated by some companies being able to gain a competitive
21
22
23 advantage, as some milk-based drinks have higher sugar content than soft drinks. Participants
24
25
26 also referred to the SDIL as a political tool to distract from other things in the budget in
27
28
29 which it was announced "... *I think this was a decision taken within the Treasury by quite a*
30
31
32
33
34 *small group of people and it was announced during a Budget by a Chancellor who was trying*
35
36
37 *to distract from some other economic figures that he maybe wasn't too pleased about.*" –

38
39
40 *Drink manufacturer.* The fact that the proposal to establish the SDIL had been kept secret,
41
42
43 and the announcement was a shock to many, led to this view. "*I think the timing was a*
44
45
46 *surprise... Yeah and the way it was done without any form of consultation or pre-*
47
48
49 *announcement.*" – *Drink manufacturer.*

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57 ***Theme 4: Consumer is king***
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Consumer response to product changes resulting from the SDIL

Industry participants discussed throughout all previous themes that meeting the wishes of consumers was the priority when responding to the SDIL. Taste preferences and tolerance of reformulation changes were critical and companies expressed concerns that consumers might dislike reformulated products if they changed dramatically in a short time period "... obviously what's critical from our perspective is developing a product that consumers still like the taste of whilst reducing their sugar intake so that we were trying to marry-up those two things." – Drink manufacturer. Company responses to the SDIL, as well as health and environmental issues more broadly, were vital to maintaining brand loyalty and company reputation in the eyes of consumers. The media were seen as influential in shaping consumer preferences and company reputation, as some newspapers had used graphics to show the sugar content of drinks and this was considered to have influenced purchasing patterns. According to informants a small group of very loyal consumers can cause a backlash publicly, which can be picked up by both the news media and social media.

Consumer momentum towards healthier products

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2
3
4 Participants stated consumer purchasing patterns are changing, with consumers increasingly
5
6
7 choosing lower sugar products, which may also have driven reformulation prior to the SDIL.
8
9

10 The policy acted as a catalyst for increasing consumer demand for sugar reduction and some
11
12
13 respondents also highlighted the role of social media in driving these trends. Consumers were
14
15
16 also reported by participants as “moving away from” artificial ingredients, which leads to
17
18
19 challenges in reformulation using non-nutritive sweeteners *"A lot of our consumers like ..., ,*
20
21
22
23 *they don't want to have sweeteners, they don't want to have preservatives" – Drink*
24
25
26 *manufacturer.* Some participants suggested that consumers were not lost when sugar was
27
28
29 reduced in their favourite products, due to consumer preferences moving towards prioritising
30
31
32 health. It was important to participants and their organisations that consumers have enough
33
34
35 choice and there were concerns that regulation could limit choice from some.
36
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44 ***Theme 5: The future of the SDIL***

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47 Participants discussed the potential of expanding the SDIL to fruit and milk-based drinks, the
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50 wider threat to other products, reformulation in other categories, changes in other sectors as a
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53 result of the SDIL and the possibility of its reversal by government.
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Extending to milk and fruit-based drinks

Concerns were expressed over the Chancellor's proposal to extend the SDIL to milk-based and fruit-based drinks at the time of the announcement *"I don't think politicians think it's done. Obviously we've got the review next year on whether milk-based drinks should be included, and then I think it's 2021 when they'll review the levels as well."* – Drink manufacturer. Participants stated the nutritional benefits of these meant that natural sugars (fructose and lactose) should not be subject to the same regulation as soft drinks. The vitamin and mineral content of these drinks was also discussed as a benefit to children who may not be consuming sufficient fruit, vegetables or calcium from other sources *"... Now you have products that are being developed with high levels of sugar in them so that really does need to be addressed but you don't want to go down the route of demonising milk because it is still a great source of nutrition."* – Out-of-home food and drink manufacturer. Reformulation of these drinks was considered particularly challenging, as naturally occurring sugars cannot be removed in the same way as added sugars in soft drinks.

Impact on the wider food and drink industry and in other sectors

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2
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4 A wider threat to other products, particularly those included in the PHE Sugar Reduction
5
6
7 Strategy [37] (another element of the Childhood Obesity Plan that encouraged voluntary
8
9
10 industry reformulation) was discussed. The SDIL demonstrated that the government was
11
12
13 willing to implement policy to regulate the food industry in a way that has not been done
14
15
16 before. Food and drink companies discussed their companies' attempts to reformulate
17
18
19 products not included in the SDIL. The SDIL was described as a rallying call for industry to
20
21
22 improve the healthfulness of products. It was also perceived to cause a ripple effect not just
23
24
25 regarding health but also sustainability, environment, media and promotions. *"Yeah, I think*
26
27
28 *there is a ripple effect. So, I think it can be both positive and negative. I think in terms of*
29
30
31 *positive, I think it can force companies to reformulate and be more innovative in driving the*
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34 *use of other ways of sweetening products" - Food and drink manufacturer*
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Proposal to reverse the SDIL

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47 Comments made by Boris Johnson in his leadership campaign to become prime minister
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49
50 (July 2019), suggested he might consider repealing the SDIL [38]. These were not taken well
51
52
53 by some participants; who indicated that companies had invested heavily in implementing the
54
55
56 levy *"I suppose it does feel like a backtrack [reversing the SDIL]. Like we've made all this*
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4 *work and it was at the time quite painful in the sense of it was such a massive change through*
5
6
7 *the supply chain so there was so many things to think about" – Out-of-home food and drink*
8
9
10 *manufacturer.* However, some participants suggested that reversing the SDIL would be well
11
12
13 tolerated. *"I think, yeah, the industry would be happy to see the back of it because it's just*
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15
16 *cumbersome, it's just something, it's just another thing to administer." - Food and drink*
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18
19 *manufacturer.*

27 Discussion

30 Summary

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33 Senior industry perspectives on the SDIL are described in five main themes. Theme 1: *A*
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36 *level playing field...for some*, Theme 2: *Complex to implement, but no lasting negatives*,
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40 Theme 3: *Why us? – the SDIL unfairly targets the drinks industry*, Theme 4: *The consumer is*
41
42
43 *king*, and Theme 5: *The future of the SDIL*. The SDIL appeared to create a level playing field
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47 which industry accepted, however, this was perceived as inadequate due to the exclusion of
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49
50 milk-based drinks and targeting only SSBs, giving some a competitive advantage.
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54 Implementation of the SDIL was time consuming and complex, leading to high financial
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57 investment to prepare for it. Strategic response to the SDIL was dependent on leadership buy-
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4 in and particularly governed by potential consumer responses to product changes associated
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6
7 with the policy. The announcement and subsequent implementation of the SDIL caused a
8
9
10 ripple effect beyond the soft drinks industry. The wider food and drink industry perceived it
11
12
13 as evidence of the government being willing to regulate to help achieve health goals.
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20 *Strengths and limitations*

21
22
23 The use of elite interviewing techniques to build relationships with and solicit meaningful
24
25 responses from participants is a strength of this work. These techniques allowed us to obtain
26
27 the views of senior professionals from commercial organisations who have often been
28
29 difficult to recruit to other studies [39]. As evident from the challenges described in the out-
30
31 of-home sector and supermarkets, including respondents outside of manufacturing allowed
32
33 wider exploration of the systemic impacts of the SDIL. A limitation of this work, however, is
34
35 that interviews were carried out over a long period of time due to challenges in recruitment.
36
37
38 Therefore, not all participants experienced the same political context, such as Boris Johnson's
39
40 threats to reverse the SDIL in July 2019. Initial plans were for longitudinal data collection
41
42 repeated across the time period of the study. Had all participants been interviewed closer to
43
44 the implementation of the SDIL in 2018, then repeated in 2020, perspectives on the political
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4 events occurring would have been captured from all participants. Unfortunately, challenges to
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6
7 recruitment and access to elite participants led to the abandonment of this plan. Although
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9
10 researcher neutrality was expressed to participants the position of interviewers as public
11
12
13 health academics could have led to these recruitment challenges.
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20 The positionality of the researchers may also have led to censoring of responses by some
21
22
23 participants. Whilst we sought to descriptively represent industry perspectives, as well as
24
25
26 acknowledge our own biases that are typically pro-health policy, it is important to
27
28
29 acknowledge that the food and drink industry will have their own biases against health policy
30
31
32 that is detrimental to their business survival, as evidenced in previous work [40,41]. Although
33
34
35 it was not the aim of the work to explore participant responses in relation to the commercial
36
37
38 determinants of health, it is possible that participant responses did not represent the reality of
39
40
41 what occurred behind the scenes in the food and drink industry in relation to the SDIL.
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46
47 Overlap between some of the responses provided in this work and the 'typical' responses
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50 explored by other researchers as an industry 'playbook' [42] may support this assertion.
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54 55 56 57 *Interpretation and implications* 58 59 60

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4 Interviewees reported that the technical aspects of drink production, particularly in the out-of-
5
6
7 home sector, were not adequately accounted for in the design of the SDIL. An unintended
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9
10 consequence of the milk-based drink exclusion, led to some organisations having to interpret
11
12
13 the particulars of the SDIL whilst their queries to HMRC went unanswered. Experiences of
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15
16 participants in this work align with findings that UK Government policy is set up poorly for
17
18
19 the purposes of adequate monitoring and evaluation [43]. Future policy should engage with
20
21
22 the wider food and beverage sector once a policy is certain to be implemented, to design and
23
24
25 communicate technicalities in ways that avoid industry having to interpret themselves what is
26
27
28 required and provide timely responses to queries surrounding implementation. Further,
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30
31 respondents indicated that lobbying against the inclusion of milk-based sugar sweetened
32
33
34 beverages in the SDIL resulted in this exclusion. Alongside policy engagement in the
35
36
37 technicalities of production, an avenue for future research would be to understand in more
38
39
40 detail the policy process surrounding the SDIL, particularly the influence of the food and
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47 drink industry on the policy particulars.
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54 Reviewing their product portfolio was also discussed, where assessments of the product mix
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56
57 as a whole and by individual product were conducted when determining the response to the
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4 SDIL. This aligns with previous findings that soft drink companies monitor their internal and
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6
7 external contexts to determine their products' market position in response to a stimulus such
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10 as the SDIL, and then respond with marketing or non-marketing activity to influence the
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13 purchasing of soft drinks [44]. A crucial external contextual component to response in our
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16 findings appears to be consumer response and preferences towards each product, as well as
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19 health as a whole.
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27 The UK soft drinks industry was reformulating products to lower sugar alternatives several
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29
30 years before the SDIL was introduced [44,45]. Perspectives expressed by participants align
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32
33 with this and suggest that there is a shift towards healthier drinks as the primary offer for
34
35
36 consumers, with the SDIL accelerating the pace of this change. Consumer preferences for
37
38
39 healthier products, and our finding that industry prioritises these health preferences in their
40
41
42 decision making, are likely to have triggered the soft drinks industry to reformulate products
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45
46 prior to the announcement of the SDIL. The advocacy (e.g. Jamie Oliver and Action on
47
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49 Sugar) in the early 2010s [46–48] and government threats to regulate industry [49] may have
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51
52 also increased consumer awareness about the health impact of sugar consumption and had a
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57 'signalling effect' to consumers to reduce their sugar consumption [50]. Participants in our
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4 study suggested that the SDIL was adopted by the Government because of the existing
5
6
7 popularity of sugar reduction among the public. It is likely that the UK public was aware that
8
9
10 SSBs harm health much earlier than the policy announcement, resulting from media activity,
11
12
13 such as that related to Jamie Oliver's campaigning [46] PHE's [47] and WHO's reports on
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16 sugar [48]. Therefore, the importance of public momentum towards health could be regarded
17
18
19 as a trigger for industry action independently from encouraging government action via policy.
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27 Finally, participants expressed concern that policies introduced to combat obesity and other
28
29
30 societal issues should be complementary not contradictory. The proposed ban on TV and
31
32
33 online advertising of high fat, salt and sugar (HFSS) products by the UK Government [36]
34
35
36 was viewed by industry to be misguided as they stated it may stop them being able to
37
38
39 advertise their reformulated products; not just those impacted by the SDIL but products
40
41
42 voluntarily reformulated which would still be classified as HFSS. Stakeholder requests for
43
44
45 consistency across policy areas was also expressed by interviewees regarding this advertising
46
47
48 ban [51]. This indicates that a more consistent approach to determining which products
49
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51 government wants industry to change would help ensure policies do not undermine one
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57 another and build trust in government amongst industry.
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Conclusion

This study explored food and drink industry perspectives on the SDIL. We found that industry accepted that legislation was useful in levelling the commercially competitive playing field. However, in practice participants stated that the SDIL had not created a 'true' level playing field as little consideration had been given to excluded product categories during policy design. Technical aspects of implementation were not adequately included and led to complexity for out of home retailers. Legislation on SSBs needs to take account of all industry sectors it affects, including out of home retail, as well as the manufacturing sector. Participants stated that only targeting sugary soft drinks was unfair due to the progress already made in the category compared to others (e.g., confectionary). The critical role of consumers in creating momentum towards sugar reduction in SSBs prior to the SDIL announcement, as well as dictating response to the SDIL was discussed. It is hypothesised that pro-health public views could be a useful lever in encouraging positive industry action independently of food and drink regulation. The impact of the SDIL was felt beyond the soft drinks industry, driving other product sectors to reformulate in anticipation of future regulation.

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7 **Acknowledgements:** For the purpose of Open Access, the author has applied a Creative
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9
10 Commons Attribution (CC BY) licence to any Author Accepted Manuscript version arising.
11
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17 **Competing Interests:** None
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23 **Contributorship Statement:** Dr. Catrin P Jones: Conceptualization, Methodology, Formal
24
25 analysis, Investigation, Data Curation, Writing - Original Draft, Project administration. Dr.
26
27 Hannah Forde: Formal analysis, Writing - Review & Editing. Dr Tarra L. Penney:
28
29 Conceptualization, Methodology, Investigation, Data Curation, Writing - Review & Editing,
30
31 Funding acquisition. Dr. Dolly R. Z. Theis: Formal analysis, Writing - Review & Editing
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33 Prof. Steven Cummins: Conceptualization, Methodology, Formal analysis, Writing - Review
34
35 & Editing, Supervision, Funding acquisition. Prof. Jean Adams: Formal analysis, Writing -
36
37 Review & Editing, Funding acquisition. Dr. Cherry Law: Formal analysis, Writing - Review
38
39 & Editing. Prof. Harry Rutter: Formal analysis, Writing - Review & Editing, Funding
40
41 acquisition. Prof. Richard Smith: Formal analysis, Writing - Review & Editing, Funding
42
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3 acquisition. Prof. Martin White: Conceptualization, Methodology, Resources, Supervision,
4
5
6
7 Project administration, Funding acquisition, Formal analysis, Writing - Review & Editing.
8
9
10

11
12
13 **Funding:** This project was funded by the NIHR Public Health Research programme (Grant
14
15
16 Nos. 16/49/01 and 16/130/01). At the time this study was conducted CPJ, MW, ELR, HF,
17
18
19 TLP, DT, JA, OA, SA, were also supported in part by: Programme grants to the MRC
20
21
22
23 Epidemiology Unit from the Medical Research Council (grant No. MC_UU_12015/6 and
24
25
26 MC_UU_00006/7); and the Centre for Diet and Activity Research (CEDAR), a UKCRC
27
28
29
30 Public Health Research Centre of Excellence – funding from the British Heart Foundation,
31
32
33 Cancer Research UK, the Economic and Social Research Council, the Medical Research
34
35
36 Council, the National Institute for Health Research, and the Wellcome Trust, under the
37
38
39
40 auspices of the UK Clinical Research Collaboration is gratefully acknowledged. HF received
41
42
43
44 funding for her PhD studentship from the Economic and Social Research Council and Public
45
46
47 Health England, and she has received further discretionary funding from the Economic and
48
49
50 Social Research Council and Murray Edwards College, Cambridge. The views expressed are
51
52
53
54 those of the authors and not necessarily those of the any of the above-named funders. The
55
56
57
58
59
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1
2
3 funders had no role in study design, data collection and analysis, decision to publish, or
4
5
6
7 preparation of the manuscript.
8
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12
13 **Data availability statement.** To maintain participant anonymity and confidentiality, data is not
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15
16
17 available due to the identifiable nature of participants from transcripts and recordings.
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23 **Ethics approval statement:** The study was approved by the Humanities and Social Science
24
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26
27 Ethics Committee at the University of Cambridge, UK. No approval ID was provided by this
28
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31 committee.
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33

34 35 36 37 **References**

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Supplementary File 1: Researcher Reflexivity

Braun and Clarke discuss reflexivity as a fundamental characteristic of thematic analysis, involving critical reflection of researcher perspectives, and how these will be integrated within the analysis and interpretation of data [22]. The complete elimination of bias is not something that can be achieved in qualitative research and more importantly should not be an aim. Unlike statistical analysis, the researcher is the tool of analysis. The researcher therefore is an integral part of the analytic process and to conduct qualitative thematic analysis well, they must develop an understanding of how their own perspectives, position and view of reality helps illuminate will influence the analysis [22].

This study aimed to centre participants' words in a descriptive manner to preserve their intention. This approach was also chosen due to reflection by the research team on our positionality as public health academics. We aimed to understand industry perspectives regarding the SDIL; however, it is important to acknowledge that the personal and professional goals of the research team (authors on this paper) as public health researchers are likely to be different from those of people working in the food and drink industry. Therefore, a descriptive approach was selected which prizes participants' words and perspectives over and above researcher interpretations. Whilst our perspectives have still influenced the analysis, as they should in good qualitative practice, we sought to minimise the influence of our biases and negativity towards some of the practices of the food and drink industry, to truly 'listen' to the perspectives of our participants. As a result, a modified version of Braun and Clarke's thematic analysis was used; reflexivity was a priority throughout the analysis in line with the approach however we sought to be less interpretive than their more recent guidance proposes [22].

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6 It is also important to note that, although we have taken a descriptive approach, the results
7
8 represent participant perspectives. Whilst the researchers work to put aside their biases which
9
10 may lean towards those more critical of the food and drink industry; statements, findings and
11
12 themes found do not represent an objective truth, rather the reported perspectives of
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14 participants. We urge readers of this work to use their own critical reflection when
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16 interpreting and using these findings.
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COREQ (CONsolidated criteria for REporting Qualitative research) Checklist

A checklist of items that should be included in reports of qualitative research. You must report the page number in your manuscript where you consider each of the items listed in this checklist. If you have not included this information, either revise your manuscript accordingly before submitting or note N/A.

Topic	Item No.	Guide Questions/Description	Reported on Page No.
Domain 1: Research team and reflexivity			
<i>Personal characteristics</i>			
Interviewer/facilitator	1	Which author/s conducted the interview or focus group?	
Credentials	2	What were the researcher's credentials? E.g. PhD, MD	
Occupation	3	What was their occupation at the time of the study?	
Gender	4	Was the researcher male or female?	
Experience and training	5	What experience or training did the researcher have?	
<i>Relationship with participants</i>			
Relationship established	6	Was a relationship established prior to study commencement?	
Participant knowledge of the interviewer	7	What did the participants know about the researcher? e.g. personal goals, reasons for doing the research	
Interviewer characteristics	8	What characteristics were reported about the interviewer/facilitator? e.g. Bias, assumptions, reasons and interests in the research topic	
Domain 2: Study design			
<i>Theoretical framework</i>			
Methodological orientation and Theory	9	What methodological orientation was stated to underpin the study? e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis	
<i>Participant selection</i>			
Sampling	10	How were participants selected? e.g. purposive, convenience, consecutive, snowball	
Method of approach	11	How were participants approached? e.g. face-to-face, telephone, mail, email	
Sample size	12	How many participants were in the study?	
Non-participation	13	How many people refused to participate or dropped out? Reasons?	
<i>Setting</i>			
Setting of data collection	14	Where was the data collected? e.g. home, clinic, workplace	
Presence of non-participants	15	Was anyone else present besides the participants and researchers?	
Description of sample	16	What are the important characteristics of the sample? e.g. demographic data, date	
<i>Data collection</i>			
Interview guide	17	Were questions, prompts, guides provided by the authors? Was it pilot tested?	
Repeat interviews	18	Were repeat interviews carried out? If yes, how many?	
Audio/visual recording	19	Did the research use audio or visual recording to collect the data?	
Field notes	20	Were field notes made during and/or after the interview or focus group?	
Duration	21	What was the duration of the interviews or focus group?	
Data saturation	22	Was data saturation discussed?	
Transcripts returned	23	Were transcripts returned to participants for comment and/or	

Topic	Item No.	Guide Questions/Description	Reported on Page No.
		correction?	
Domain 3: analysis and findings			
<i>Data analysis</i>			
Number of data coders	24	How many data coders coded the data?	
Description of the coding tree	25	Did authors provide a description of the coding tree?	
Derivation of themes	26	Were themes identified in advance or derived from the data?	
Software	27	What software, if applicable, was used to manage the data?	
Participant checking	28	Did participants provide feedback on the findings?	
<i>Reporting</i>			
Quotations presented	29	Were participant quotations presented to illustrate the themes/findings? Was each quotation identified? e.g. participant number	
Data and findings consistent	30	Was there consistency between the data presented and the findings?	
Clarity of major themes	31	Were major themes clearly presented in the findings?	
Clarity of minor themes	32	Is there a description of diverse cases or discussion of minor themes?	

Developed from: Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*. 2007. Volume 19, Number 6: pp. 349 – 357

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BMJ Open

Industry views of the UK Soft Drinks Industry Levy: a thematic analysis of elite interviews with food and drink industry professionals, 2018-20

Journal:	<i>BMJ Open</i>
Manuscript ID	bmjopen-2023-072223.R3
Article Type:	Original research
Date Submitted by the Author:	14-Jul-2023
Complete List of Authors:	Jones, Catrin; University of Cambridge, MRC Epidemiology Unit Forde, Hannah; University of Cambridge, MRC Epidemiology Unit; University of Oxford, Nuffield Department of Primary Care Health Sciences Penney, Tarra; York University, Global Food System and Policy Research, School of Global Health, Faculty of Health Theis, Dolly; University of Cambridge, MRC Epidemiology Unit Cummins, Steven; London School of Hygiene & Tropical Medicine, Population Health Innovation Lab, Department of Public Health, Environments & Society, Faculty of Public Health and Policy Adams, J; University of Cambridge, MRC Epidemiology Unit Law, Cherry; University of Reading, Department of Agri-Food Economics and Marketing Rutter, Harry; University of Bath Department of Social and Policy Sciences, Social and Policy Sciences Smith, Richard ; University of Exeter, Faculty of Health and Life Sciences White, Martin; University of Cambridge, MRC Epidemiology Unit
Primary Subject Heading:	Health policy
Secondary Subject Heading:	Qualitative research
Keywords:	Health policy < HEALTH SERVICES ADMINISTRATION & MANAGEMENT, Public health < INFECTIOUS DISEASES, QUALITATIVE RESEARCH

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3 **Industry views of the UK Soft Drinks Industry Levy: a thematic analysis of elite interviews**
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7 **with food and drink industry professionals, 2018-20**
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39 **Keywords:** Soft drinks, Soft drinks industry levy, Food and drink industry, sugar sweetened
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42 beverage
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50 **Word count:** 6605
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56 **Abstract**
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4 **Objectives:** The UK Soft Drinks Industry Levy (SDIL), implemented in 2018, has been
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7 successful in reducing the sugar content, and purchasing, of soft drinks, with limited financial
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10 impact on industry. Understanding the views of food and drink industry professionals
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13 involved in reacting to the SDIL is important for policymaking. However, their perceptions
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16 of the challenges of implementation and strategic responses are unknown. The aim of this
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19 study therefore was to explore how senior food and drink industry professionals viewed the
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24 SDIL.

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27 **Design:** We undertook a qualitative descriptive study using elite interviews. Data were
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29
30 analysed using Braun and Clarke's approach to thematic analysis, taking an inductive
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33 exploratory and descriptive approach not informed by prior theory or frameworks.
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37 **Setting and participants:** Interviews were conducted via telephone with 14 senior
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40 professionals working in the food and drink industry.
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44 **Results:** Five main themes were identified: (1) *A level playing field...for some*; Industry
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47 accepted the SDIL as an attempt to create a level playing field but due to the exclusion of
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50 milk-based drinks, this was viewed as inadequate. (2) *Complex to implement, but no lasting*
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53 *negatives*; The SDIL was complex, expensive and time consuming to implement, with
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56 industry responses dependent on leadership buy-in. "(3) *Why us? – the SDIL unfairly targets*
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4 *the drinks industry*"; soft drinks are an unfair target when other categories also contain high
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7 sugar. "(4) *The consumer is king*"; Consumers were a key focus of the industry response to
8
9
10 this policy. "(5) *The future of the SDIL*"; There appeared to be a wider ripple effect, which
11
12
13 primed industry to prepare for future regulation in support of health and environmental
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17 sustainability.

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20 **Conclusions:** Insights from senior food and drink industry professionals illustrate how sugar
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23 sweetened beverage taxes might be successfully implemented and improve understanding of
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27 industry responses to taxes and other food and drink policies.
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33 **Strengths and limitations of this study**

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37 • This qualitative study explored how senior food and drink industry professionals
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40 viewed the Soft Drinks Industry Levy.
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44 • We undertook elite interviews with 14 professionals working in the food and drink
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47 industry, who have often been difficult to recruit in other studies.
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51 • Braun and Clarke's thematic analysis, taking a descriptive approach, was used to
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54 analyse the data.
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4 • Elite interviewing methods allow for the building of relationships to elicit meaningful
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7 responses from participants.
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10 • A limitation of this work is that interviews were carried out over a long period of time
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13 due to challenges in recruitment.
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Introduction

Diet-related non-communicable diseases are a major and growing problem, responsible for over 11 million deaths globally each year [1]. Sugar consumption is of particular concern, with the World Health Organization (WHO) recommending member states introduce sugar-sweetened beverage (SSB) taxes [2]. Reviews suggest that they reduce sales of, increase prices of and encourage reformulation of SSBs [3–5] and over 100 SSB taxes have been implemented worldwide covering 52% of the world's population [6]. SSB taxes have a variety of designs with 87% excise taxes [6]. The WHO recommend that a tiered SSB tax be introduced in countries with high administrative capacity, similar to that which has been introduced in the UK [2]. The Soft Drinks Industry Levy (SDIL) was announced on 16th March 2016 and implemented in the United Kingdom (UK) on 6th April 2018. According to the budget speech by George Osborne, Chancellor of the Exchequer at the time, it was designed to incentivise manufacturers of SSBs to reformulate their products [7] via charging a levy on soft drinks produced by companies when they leave the warehouse or when imported into the country [8]. Integrated in August 2016 as part of the UK Government's Childhood Obesity: A Plan For Action [9], the SDIL consists of two tiers (for particulars of the tax, see Box 1). A public consultation on the proposals between August - October 2016

1
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3 set out the plans for the tiers and exclusions as described in Box 1. Few changes were made
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7 as a result of this consultation and the SDIL was given royal assent on 27th April 2017. The
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10 Government published a second chapter of its childhood obesity plan in 2018, which
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13 suggested the SDIL may be extended to milk-based drinks, though this has not yet occurred
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34 **Box 1. Soft Drinks Industry Levy Particulars [7]**

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37 Eligible drinks:

- 38 • ≥ 8 g total sugar per 100 mL charged at 24 pence per litre
- 39
- 40 • ≥ 5 g and < 8 g total sugar per 100 mL charged at 18 pence per litre
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47 Exemptions:

- 48 • Drinks containing more than 75% milk or 1.2% alcohol
- 49
- 50 • Alcohol substitute drinks
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- 56 • Powdered drinks
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- 100% fruit juices
- Manufacturers selling under one million litres of drinks per year[11]

The SDIL was one of the first SSB fiscal interventions explicitly designed to incentivise reformulation [7,12,13]. This aim was largely achieved, substantially reducing overall SSB sugar content, and inducing a major shift of drinks from the higher levy tier to the lower tier and untaxed bracket between 2016 and 2018 (Scarborough et al., 2020). Reformulation is reflected in purchases of sugar from SSBs, with [14]. Prior to implementation of the SDIL, the food and drinks industry (hereafter referred to as ‘industry’) viewed the SDIL as having a potentially negative impact on profits resulting in job losses [15–17]. A negative stock market reaction to the SDIL announcement was observed, but this only lasted two days [18]. Similarly, a negative impact on company domestic turnover was observed following the announcement of the SDIL, but this resolved by the time of its implementation [19].

Critical to the success of the SDIL is the implementation of and reaction to the regulations by the drink industry. Therefore, it is important to understand perspectives of the industry as well as those who work in it regarding the implementation of such taxes. Previous work has

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2
3 investigated industry perspectives of the SDIL expressed through the news media [15,20–23]
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7 and the views of industry, civil society and academic participants on how marketing changed
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10 in response to the SDIL [24]. A notable gap in the literature, however, is perspectives of the
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13 SDIL from the commercial sector, not communicated publicly through news media nor
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16 focused solely on marketing responses. Important learning can be obtained by exploring the
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19 perspectives of commercial actors involved in responding to regulation. Interviews with
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23 senior members of industry can help examine the impact of the SDIL on both the soft drinks
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26 industry and wider food and drink industry, an avenue not previously explored. This study
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29 therefore aimed to address these knowledge gaps and inform policymaking by exploring the
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32 perspectives of senior industry professionals regarding the UK SDIL.
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40 **Methods**

41 *Study design*

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44 This study adopted a qualitative descriptive design involving elite interviews with senior
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47 industry professionals.
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57 *Methodological orientation*

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4 This research took an experiential qualitative approach, within a critical realist position.
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7 Participant perspectives and perceptions were prized over researcher interpretations, and
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10 reality was derived from our participants' words and meaning, rather than a reality
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13 constructed through researchers' interpretation of their words [25]. A descriptive approach
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16 was used to explore how the SDIL was viewed from the position of our participants.
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23 ***Research team***

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25
26 Prof Martin White (MW), Prof Steven Cummins (SC), Prof Jean Adams (JA), Prof Rich
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28

29 Smith (RS) and Prof Harry Rutter (HR) secured funding for the overall evaluation of the
30
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32 SDIL within which this study formed a part [26]. Interviews were conducted by Postdoctoral
33
34

35 Research Associates Dr. Tarra L Penney (TLP) and Dr. Catrin P Jones (CPJ). TLP led the
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37

38 design of data collection and CPJ led the design of the analysis. MW & SC provided
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41 guidance on the design of both elements. TLP and CPJ recruited and interviewed participants.
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46 CPJ led the analysis with support from Dr Hannah Forde (HF). HF conducted secondary
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49 coding to support theme generation and interpretation. All authors previously mentioned, as
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52 well as Dr Dolly Theis (DT) and Dr Cherry Law (CL) were involved in data analysis and
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55 interpretation, as well as drafting this manuscript.
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Participants

Senior professionals from the soft drinks, food and other drinks industries were recruited to this study using purposive and snowball sampling. We adopted 'elite interviewing' methods to maximise involvement of senior professionals in positions of influence within their organisation and with high levels of responsibility [27]. This technique provides a series of strategies to support recruitment of difficult to access key participants, and to ensure the validity and reliability of data [28]. The principles of elite interviewing were used to inform recruitment including stronger emphasis on the maintenance of trust, importance of interview tone of the interview, preparing appropriately, and engaging in and tailoring dialogue relevant to each informant, more so than in traditional interviews [29,30].

Individuals were considered eligible to participate based on the following criteria: a) currently or previously held a high-level industry position (at the managerial, director or chief officer level), b) their organisation and their professional role was directly or indirectly impacted by the SDIL and c) they could provide a novel perspective, determined by their job role or the company they work for not previously heard in our interviews, to ensure a range

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4 of views. Recruitment typically involved an email introduction by a member of the team or
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7 informant contact, although CPJ also attended industry food events and recruited face to face.
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10 Initial contact was followed by an informal telephone conversation with TLP or CPJ to
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13 discuss the research purpose, team and informant interests and perspectives, ultimately
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16 proceeding to full participation via telephone interview. Recruitment ceased when networks
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19 were exhausted, and no further contacts identified.
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27 *Data collection*

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30 Telephone interviews were conducted from June 2018 to June 2020. Participant information
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33 sheets were sent to potential participants prior to participating in the informal discussion.
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37 Informed consent was obtained verbally prior to commencement of the formal telephone
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40 interview, which was digitally audio-recorded. Interviews were undertaken using a minimally
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43 structured topic guide containing three broad areas of inquiry: a) Can you tell me about your
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46 role and organization? b) Can you tell me about your sector as a whole? c) What do you
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49 know about the UK Soft Drinks Industry Levy and its impacts? Elite interviewing
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52 necessitates informed and adaptive dialogue [29,31], meaning participants could engage in
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55 ways most relevant to their specific expertise or experiences within these broad areas.
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4 Interviews were transcribed verbatim by a trusted external company, and transcripts were
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7 checked against the audio files by CPJ to identify any inaccuracies. Transcripts were
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10 anonymised prior to analysis by removing names of people, organisations, and brands.
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17 *Analysis*

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20 Analysis commenced once all interviews had been conducted and transcribed. Braun and
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23 Clarke's thematic analysis was used, taking an inductive exploratory and descriptive
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26 approach not informed by any prior theory or framework [32]. This approach is flexible due
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29 to lack of alignment with specific epistemological and ontological stance [33,34]. Six
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32 analytic steps were conducted: 1) familiarisation, 2) data coding, 3) initial theme generation,
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37 4) theme development and review, 5) theme refining, defining and naming, 6) writing up.
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44 CPJ listened to audio files and read transcripts at least twice to become familiar with them,
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47 whilst making notes on initial impressions and patterns (step 1). Following familiarisation,
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50 CPJ worked systematically through the entire data set and conducted complete coding of all
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53 data, in which segments of data were given a label to describe their area of interest. Coding
54
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57 was supported by NVivo software version 12. Semantic codes were derived directly from
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4 participants' speech or codes where phrases of speech were brief enough to be directly coded
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7 (step 2). CPJ then sorted these initial codes into concise categories (overarching codes),
8
9
10 which clearly described the content of the data (step 3). A reflective diary was kept
11
12
13 throughout the coding process by CPJ to note reflections on findings and to ensure a data-
14
15
16 driven analytic process. Please see supplementary file 1 for a detailed account of reflexivity.
17
18
19
20
21
22
23 HF also familiarised themselves with the transcripts (step 1) and then examined CPJ's coding to
24
25
26 ensure the codes were data driven with as little interpretation as possible (step 2). CPJ then
27
28
29 collated codes that shared a common pattern into themes (step 3). Again, CPJ and HF met to
30
31
32 discuss and refine the themes to ensure they were descriptive with minimal interpretation
33
34
35
36
37 (step 4).
38
39
40
41
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43

44 A document containing themes, codes within them, and extensive anonymised quotes was
45
46
47 shared with all co-authors in two phases: phase 1 March 2022 and phase 2 October 2022
48
49
50 (step 5). This data clinic aimed to minimise researcher interpretation. A document presented
51
52
53 theme descriptions and asked co-authors to answer the following questions for each theme: 1)
54
55
56 Is the theme descriptive? 2) Does the theme represent the data accurately? 3) What do you
57
58
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60

1
2
3 think the theme tells us about the SDIL from the perspective of industry? JA, DT, CL
4
5
6 completed the data clinic document in phase 1. Themes were amended based on their
7
8
9
10 reflections and the document updated in October 2022. SC, MW, HR & RS completed the
11
12
13 data clinic form in phase 2. Final themes and the manuscript were written up by CPJ and
14
15
16
17 reviewed by all co-authors (step 6).
18
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22

23 ***Patient and public involvement***

24
25
26 This study is part of the 'Evaluation of the health impacts of the UK Treasury Soft Drinks
27
28
29 Industry Levy (SDIL)' funded by NIHR ([award no. 16/130/01](#)). Project oversight is provided
30
31
32
33 by an independent study steering committee (ISSC) which contains members of the public.
34
35
36
37 The ISSC for the overall project met biannually from 2017 – 2023 and were asked to provide
38
39
40
41 advice on methodology as well as interpretation of our findings.
42
43
44
45
46

47 **Results**

48
49
50 Fourteen participants were recruited (Table 1). Participants' roles within organisations were
51
52
53
54 diverse; chief officers, directors, and managers with overall responsibility or with specialist
55
56
57 responsibilities for finance, strategy, operations, marketing, public relations or nutrition.
58
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1
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3 Interviews ranged in length from 26 to 62 minutes. Six additional participants were
4
5
6
7 approached and took part in informal discussions; three did not participate due to scheduling
8
9
10 issues, and three refused to take part. Five inductively derived, interlinked themes and 15
11
12
13 subthemes were identified (Box 2).
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27 **Table 1.** Participant details
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29

Sector Category	N
Drink manufacturers	4
Food and drink manufacturers	3
Supermarkets	3
Industry associations	1
Out-of-home* food and drink manufacturers	1
Out-of-home retailers	1
Advertising consultants	1

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*** “The out-of-home sector is generally considered to be any outlet where food or drink is prepared in a way that means it is ready for immediate consumption, on or off the premises”[35]*

Box 2. Theme and sub-theme summary

Theme 1: A level playing field...for some

The SDIL created a level playing field

Milk-based drinks increased the complexity in the out-of-home sector

Challenges for supermarkets with large product portfolios

Theme 2: Complex to implement but no lasting negative effects

Complexities in strategic response – price and product are key

Global companies and internal systems

Contradictory government messaging

Leadership buy-in dictates strategic response

Few long-lasting negative effects & SDIL provided opportunities

Theme 3: Why us? – The SDIL unfairly targets the drinks industry

Sugary drinks in isolation were unfair targets for regulation

Distrust of government's motivations to introduce the SDIL

Theme 4: Consumer is king

Consumer response to product changes resulting from the SDIL

Consumer momentum towards healthier products

Theme 5: The future of the SDIL

Extending to milk and fruit-based drinks

Impact on the wider food and drink industry and on other sectors

Proposal to reverse the SDIL

Theme 1: A level playing field...for some

The SDIL created a level playing field

1
2
3
4 Industry professionals accepted that the SDIL helped create a level playing field, where no
5
6
7 organisation lost out by taking action on health that their competitors did not “... *legislation*
8
9
10 *level playing fields is so important and that’s why with these big public health*
11
12
13 *initiatives...I’m actually really quite pro government intervention” – Supermarket. Soft*
14
15
16 drinks manufacturers also discussed that the two years to prepare for the implementation of
17
18 the SDIL was sufficient and they were happy they could develop an adequate response within
19
20 that time. “*I’m not aware of any significant implementation or challenges that our members*
21
22
23 *have encountered, I mean they did have time to adapt, the legislation was published in good*
24
25
26 *time to allow them to understand exactly what they would be required to do” – Trade*
27
28
29
30
31 *association*
32
33
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41 However, participants also stated that a lack of understanding and consultation from
42
43 government meant a ‘true’ level playing field for all sectors involved in the sales of sugary
44
45 drinks had not been not achieved “...*you want to really do it smartly so everybody feels*
46
47
48 *they’re 100% equally affected and you don’t get this... ‘my product is in scope, your product*
49
50
51 *is out of scope’...it doesn’t create the sense of unilateral ‘let’s do this’... which is what it*
52
53
54
55
56
57 *should be, if that makes sense” – Food and drink manufacturer. The lack of consultation by*
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3
4 the government with sectors who were not soft drinks manufacturers (for example out of
5
6
7 home retailers) and the exclusion of milk-based sugary drinks led to this perception “...*milk-*
8
9
10 *based drinks often carried bigger serving sizes and had more total sugar in them than any of*
11
12
13 *our products would. They were excluded from the levy as well which looked like a big*
14
15
16 *shortcoming.*” *Drink manufacturer.*

Milk-based drinks increased the complexity in the out-of-home sector

27 Interviewees explained that, from their perspective, the government did not think clearly
28
29
30 about the technical implications for retailers and out-of-home sector and that it was easier for
31
32
33 soft drink manufacturers to respond to the levy than it was for other industry actors “...*I*
34
35
36 *don't think they understood the ways of working and the preparation methods in the out-of-*
37
38
39 *home sector...*” – *Out-of-home food and drink manufacturer.* A high level of complexity
40
41
42
43 within the out-of-home sector to manufacture and produce drinks for immediate consumption
44
45
46
47 led to higher implementation costs; specifically, the exclusion of milk-based drinks and
48
49
50
51 specification around eligibility of drinks mixed with carbon dioxide, water and ice, and those
52
53
54 with and without milk. “...*they were looking at the likes of drinks fountains for carbonated*
55
56
57 *soft drinks because... a bag and box syrup, they would be mixed with ice or carbon dioxide*
58
59
60

1
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3
4 *to give the carbonation or either they could be mixed with water and that would capture those*
5
6
7 *drinks in the out-of-home sector, but there was a vagueness to milk-based drinks” – Out-of-*
8
9
10 *home food and drink manufacturer. Some queries to Her Majesty’s Revenue and Customs*
11
12
13 (HMRC – the tax collecting authority in the UK) went unanswered, thus, the out-of-home
14
15
16
17 sector had to interpret the legislation themselves and apply the SDIL according to their
18
19
20 interpretation. Representatives of the out-of-home sector did not perceive two years as
21
22
23 enough time to have prepared due to confusion surrounding eligibility. In contrast, soft drinks
24
25
26
27 manufacturers stated they had had time to prepare.
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29
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Challenges for supermarkets with large product portfolios

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35
36
37 Supermarkets felt disadvantaged compared to soft drink manufacturers by the complexities of
38
39
40 their sector. They highlighted sector-specific challenges to adapting to the SDIL, including
41
42
43 that their product portfolio not only contains branded drinks, about which they have to make
44
45
46 decisions, but also private label (own brand) drinks “... *what branded suppliers chose to do*
47
48
49 *was their choice...different brands choosing to reformulate, resize or inflate, which I think*
50
51
52
53 *led to a fair bit of customer confusion as to what the hell was going on. “ – Supermarket. It*
54
55
56
57 was described as challenging and time consuming to manage such a large portfolio and make
58
59
60

1
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3
4 decisions on each product. Particularly as reformulation decisions and portion size reduction
5
6
7 reportedly differed between brands yet had to be merchandised together within stores.
8
9

10 Retailers also felt that they were disadvantaged as their customers expressed confusion at
11
12
13 differing responses by different brands – e.g. ‘sugary’ drinks reformulated to just below the
14
15
16 SDIL threshold but containing both sugar and sweeteners confused customers, with queries
17
18
19 directed at retailers rather than drinks manufacturers “... *we tried to make it as clear for*
20
21
22
23 *customers by putting on all the [shelves] sugar levy applied, so they could very much*
24
25
26 *see...But...when they see a sugar line that’s not [included in the SDIL], that’s when the*
27
28
29 *questions start coming.*” – *Supermarket.*
30
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37 ***Theme 2: Complex to implement but no lasting negative effects***

38 ***Complexities in strategic response – price and product are key***

39
40
41
42
43 Industry responded to the SDIL by reviewing product portfolios and strategically selecting
44
45
46 responses at the individual product level. This portfolio review approach is why responses
47
48
49 differed between companies and between products. Research and development (R&D) and
50
51
52 consumer testing were costly for industry during this process, and, linking to theme 1, there
53
54
55
56
57 were increased costs for those companies with larger product portfolios (e.g. supermarkets).
58
59
60

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3
4 For the out-of-home sector, additional complications were noted due to confusion over
5
6
7 eligibility of some milk-based drinks “...government is very keen to always say “oh just
8
9
10 reformulate, it will be easy” but it’s not easy. It actually takes a lot of time and investment.” –
11
12

13 *Drink manufacturer.*

14
15
16
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18
19
20 Consumer testing was vital during the reformulation and decision-making process and
21
22
23 consumer preference dictated the strategy taken “... we invested a significant amount of
24
25
26 money...in developing lots and lots of different formulations with lower sugar to see and
27
28
29 testing them with consumers in Great Britain to see whether those recipes... would be
30
31
32 acceptable to consumers.” – *Drink manufacturer.* An additional challenge in reformulating
33
34
35 drinks described by manufacturers was that sugar serves a functional purpose, in the
36
37
38 mouthfeel of drinks mixed with ice and to prevent ‘brain freeze’, as well as to provide
39
40
41 sweetness “Because, actually, yes, we could stick sweeteners in everything, but, actually,
42
43
44 sugar also has like a functional role” – *Out-of-home retailer.*
45
46
47
48
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54 Packaging, merchandising and placement were challenges to overcome, particularly for
55
56
57 supermarkets. Decisions were made on own brand products but also on how to retail other
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4 branded products with different responses to the SDIL (e.g. reformulated drinks, reduced and
5
6
7 increased portion sizes, rebranding) "...there were a number of products that didn't
8
9
10 reformulate but did drop size. So, again, there's just small considerations in that around how
11
12
13 you merchandise it... So what sounds like a relatively simple change, of dropping from
14
15
16 330ml to, I don't know, 250ml, in reality kind of that complexity flows back through the
17
18
19 value chain" – Supermarket.

Leadership buy-in dictates strategic response

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30 Leadership buy-in to health, where senior management 'buy-in' to the idea that their
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32
33 company should be making pro-health decisions, was discussed as vital in dictating the
34
35
36 strategic response to the SDIL "... I think such a review requires strong leadership and ... our
37
38
39 COO was very clear that we needed to step in and we needed to do, you know, do the
40
41
42 responsible, brave thing." -Drink manufacturer. Participants described this buy-in as making
43
44
45 the process simpler and a lack of buy-in as a barrier to making timely progress "... having
46
47
48 that strong leadership and, you know, complete buy-in from the top team and actually pretty
49
50
51 much all the other levels of the organisation, then it's actually quite simple" – Drink
52
53
54
55
56
57 manufacturer.

Global companies and internal systems

The cost of setting up internal systems to account for and pay the SDIL was expensive, due to the requirement to report to HMRC, regardless of whether or not a company involved in the manufacture or selling of soft drinks was liable to pay the levy “...*It’s ridiculous that, you know, it’s cost us half a million pounds just to tell Treasury that actually we don’t need to pay it.*” – *Drink manufacturer*. The global nature of many of these companies was an additional challenge. Response strategies appropriate for a UK market may not be transferable to other countries, for example reformulation recipes vary due to differences in consumer palate and storage temperatures/facilities “...*that’s [computer system] for the UK, and then Ireland have a separate system, France have a separate system, Mexico have a separate system.*” – *Food and drink manufacturer*.

Contradictory government messaging

There was confusion over whether manufacturers needed to pass on price increases to change consumer behaviour due to contradictory government messaging over the aim of the SDIL. Participants indicated that they thought price increases should have been passed on to target

1
2
3 individual behaviour change; however, manufacturers stated they had no control over
4
5
6 whether this occurred as retailers set the price for consumers “...[the] government had
7
8
9
10 *slightly mixed messages so it was pretty clear from the Department of Health and PHE*
11
12
13 [Public Health England] ... *that they expected to see prices passed on ... I think the Treasury*
14
15
16 *were trying to say, oh soft drinks manufacturers don't have to pass this on... Well, apart from*
17
18
19 *the fact that most businesses won't absorb a cost if they can avoid it for obvious reasons, it*
20
21
22 *was the opposite of what the Health Department and others wanted...*” – *Drink manufacturer.*
23
24
25
26
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28
29

30 ***Few long-lasting negative effects & SDIL provided opportunities***

31
32
33 Participants acknowledged that the SDIL did achieve its aim in stimulating product
34
35
36 reformulation to avoid the levy. Although implementation was complex and costly, as
37
38
39 previously illustrated, there were few long-lasting negative effects. Some participants
40
41
42 suggested the SDIL provided opportunities “*I think some of them would have switched back*
43
44
45
46 *but we've gained new consumers as well which is, you know, how we, which through*
47
48
49 *sampling and advertising essentially.*” – *Drink manufacturer.* However, participants were
50
51
52
53
54
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56
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58
59
60 sceptical that the SDIL would achieve intended reductions in childhood obesity in the UK.

1
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3
4 *"... why [the SDIL] it was thought that that would be a, that policy in isolation would be*
5
6
7 *sufficient to reduce obesity rates."* – Drink manufacturer.
8
9

10
11
12
13 ***Theme 3: Why us? – The SDIL unfairly targets the drinks industry***
14

15
16
17 ***Sugary drinks in isolation were unfair targets for regulation***
18

19
20 Participants felt that the SDIL unfairly targets the soft drinks industry. Participants expressed
21
22 their frustration that a single food category was targeted when other food categories bear a
23
24 significant proportion of the responsibility for childhood obesity. They expressed the view
25
26 that multiple nutrients or calories across many food and drink sectors should be targeted by
27
28 regulation if the government is serious about reducing childhood obesity, particularly as
29
30 substitution to other non-regulated food categories could negate the impact of the SDIL on
31
32 health *"... why would it be just the soft drink levy, why would you not target cakes and*
33
34 *biscuits...that's what we didn't understand at the time."* - Food and drink manufacturer..
35
36
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50
51 There was consensus among participants that it did not make sense for the government to
52
53 target a category that they considered was already reducing sugar faster than other food
54
55 categories. Although the SDIL had accelerated the reformulation progress for some, this was
56
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1
2
3 stated to be already occurring prior to the SDIL announcement. Participants expressed the
4
5
6
7 view that the sector had been unfairly penalised, and that sectors which reformulate should be
8
9
10 praised rather than targeted by regulation when other unregulated categories have contributed
11
12
13 little towards achieving health goals. *"... the soft drinks category was already well embarked*
14
15
16 *on the journey to reformulation...part of the industry's disappointment and frustration about*
17
18
19 *the announcement of the levy was that they were already absolutely going to deliver what the*
20
21
22 *levy has now kind of made them deliver"* – Trade association
23
24
25
26
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29

Distrust of government's motivations to introduce the SDIL

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32
33 Participants stated that the SDIL was politically motivated, not an evidence-based policy.
34
35
36
37 Government policies targeting obesity were described as contradictory and not aligned with
38
39
40 one another, particularly the proposed ban on advertising of less healthy foods on TV and
41
42
43 online [36]. According to participants, the advertising ban does not distinguish between
44
45
46 reformulated and non-reformulated products, and acts as a disincentive to spending on
47
48
49 reformulation if they cannot recoup their investment through advertising new products. *"So if*
50
51
52 *you can take something from 40g of sugar to 20g of sugar but you'd only advertise on TV is*
53
54
55
56
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59
60

1
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4 *it's 5(g), then why bother, right, and it also means that they can't tell the world, look at this*
5
6
7 *amazing thing we've done, we've reformulated this" – Advertising consultant.*
8
9

10
11
12
13 Perceived disconnectedness between policies led to distrust in the government and a belief
14
15
16 that government obesity policy is poorly planned. Distrust was compounded by some
17
18
19 companies appearing to be successful at lobbying the government following the
20
21
22
23 announcement, resulting in changes to the regulations as a result of this lobbying, rather than
24
25
26 on the basis of health or nutrition, in particular the decision to exclude milk-based drinks.
27
28

29
30 Participants stated this was motivated by some companies being able to gain a competitive
31
32
33 advantage, as some milk-based drinks have higher sugar content than soft drinks. Participants
34
35
36 also referred to the SDIL as a political tool to distract from other things in the budget in
37
38
39 which it was announced "... *I think this was a decision taken within the Treasury by quite a*
40
41
42
43 *small group of people and it was announced during a Budget by a Chancellor who was trying*
44
45
46 *to distract from some other economic figures that he maybe wasn't too pleased about."* –
47
48

49
50 *Drink manufacturer.* The fact that the proposal to establish the SDIL had been kept secret,
51
52
53 and the announcement was a shock to many, led to this view. *"I think the timing was a*
54
55
56
57
58
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60

1
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3
4 *surprise... Yeah and the way it was done without any form of consultation or pre-*
5
6
7 *announcement." – Drink manufacturer.*
8
9

10 11 12 13 ***Theme 4: Consumer is king***

14 15 16 17 ***Consumer response to product changes resulting from the SDIL***

18
19
20 Industry participants discussed throughout all previous themes that meeting the wishes of
21
22
23 consumers was the priority when responding to the SDIL. Taste preferences and tolerance of
24
25
26 reformulation changes were critical and companies expressed concerns that consumers might
27
28
29 dislike reformulated products if they changed dramatically in a short time period "...
30
31
32 *obviously what's critical from our perspective is developing a product that consumers still*
33
34
35
36
37 *like the taste of whilst reducing their sugar intake so that we were trying to marry-up those*
38
39
40 *two things." – Drink manufacturer.* Company responses to the SDIL, as well as health and
41
42
43 environmental issues more broadly, were vital to maintaining brand loyalty and company
44
45
46 reputation in the eyes of consumers. The media were seen as influential in shaping consumer
47
48
49 preferences and company reputation, as some newspapers had used graphics to show the
50
51
52
53
54 sugar content of drinks and this was considered to have influenced purchasing patterns.
55
56
57
58
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60

1
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3
4 According to informants a small group of very loyal consumers can cause a backlash
5
6
7 publicly, which can be picked up by both the news media and social media.
8
9
10
11
12

13 ***Consumer momentum towards healthier products***

14
15
16
17 Participants stated consumer purchasing patterns are changing, with consumers increasingly
18
19
20 choosing lower sugar products, which may also have driven reformulation prior to the SDIL.
21
22
23 The policy acted as a catalyst for increasing consumer demand for sugar reduction and some
24
25
26 respondents also highlighted the role of social media in driving these trends. Consumers were
27
28
29 also reported by participants as “moving away from” artificial ingredients, which leads to
30
31
32 challenges in reformulation using non-nutritive sweeteners *"A lot of our consumers like ..., ,*
33
34
35
36
37 *they don't want to have sweeteners, they don't want to have preservatives" – Drink*
38
39
40 *manufacturer.* Some participants suggested that consumers were not lost when sugar was
41
42
43 reduced in their favourite products, due to consumer preferences moving towards prioritising
44
45
46 health. It was important to participants and their organisations that consumers have enough
47
48
49 choice and there were concerns that regulation could limit choice from some.
50
51
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56

57 ***Theme 5: The future of the SDIL***

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3
4 Participants discussed the potential of expanding the SDIL to fruit and milk-based drinks, the
5
6
7 wider threat to other products, reformulation in other categories, changes in other sectors as a
8
9
10 result of the SDIL and the possibility of its reversal by government.
11
12
13
14
15
16

17 *Extending to milk and fruit-based drinks*

18
19
20 Concerns were expressed over the Chancellor's proposal to extend the SDIL to milk-based
21
22
23 and fruit-based drinks at the time of the announcement *"I don't think politicians think it's*
24
25
26 *done. Obviously we've got the review next year on whether milk-based drinks should be*
27
28
29 *included, and then I think it's 2021 when they'll review the levels as well."* – Drink
30
31
32
33 *manufacturer.* Participants stated the nutritional benefits of these meant that natural sugars
34
35
36 (fructose and lactose) should not be subject to the same regulation as soft drinks. The vitamin
37
38
39 and mineral content of these drinks was also discussed as a benefit to children who may not
40
41
42 be consuming sufficient fruit, vegetables or calcium from other sources *"... Now you have*
43
44
45 *products that are being developed with high levels of sugar in them so that really does need to*
46
47
48 *be addressed but you don't want to go down the route of demonising milk because it is still a*
49
50
51 *great source of nutrition."* – *Out-of-home food and drink manufacturer.* Reformulation of
52
53
54
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1
2
3 these drinks was considered particularly challenging, as naturally occurring sugars cannot be
4
5
6
7 removed in the same way as added sugars in soft drinks.
8
9
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11
12

13 ***Impact on the wider food and drink industry and in other sectors***

14
15
16 A wider threat to other products, particularly those included in the PHE Sugar Reduction
17
18 Strategy [37] (another element of the Childhood Obesity Plan that encouraged voluntary
19
20 industry reformulation) was discussed. The SDIL demonstrated that the government was
21
22
23 willing to implement policy to regulate the food industry in a way that has not been done
24
25
26 before. Food and drink companies discussed their companies' attempts to reformulate
27
28
29 products not included in the SDIL. The SDIL was described as a rallying call for industry to
30
31
32 improve the healthfulness of products. It was also perceived to cause a ripple effect not just
33
34
35 regarding health but also sustainability, environment, media and promotions. *"Yeah, I think*
36
37
38 *there is a ripple effect. So, I think it can be both positive and negative. I think in terms of*
39
40
41 *positive, I think it can force companies to reformulate and be more innovative in driving the*
42
43
44 *use of other ways of sweetening products"* - Food and drink manufacturer
45
46
47
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56

57 ***Proposal to reverse the SDIL***

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4 Comments made by Boris Johnson in his leadership campaign to become prime minister
5
6
7 (July 2019), suggested he might consider repealing the SDIL [38]. These were not taken well
8
9
10 by some participants; who indicated that companies had invested heavily in implementing the
11
12
13 levy *"I suppose it does feel like a backtrack [reversing the SDIL]. Like we've made all this*
14
15
16 *work and it was at the time quite painful in the sense of it was such a massive change through*
17
18
19 *the supply chain so there was so many things to think about" – Out-of-home food and drink*
20
21
22 *manufacturer. However, some participants suggested that reversing the SDIL would be well*
23
24
25 tolerated. *"I think, yeah, the industry would be happy to see the back of it because it's just*
26
27
28 *cumbersome, it's just something, it's just another thing to administer." - Food and drink*
29
30
31 *manufacturer.*
32
33
34
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40

41 Discussion

42 43 44 *Summary*

45
46
47 Senior industry perspectives on the SDIL are described in five main themes. Theme 1: *A*
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49
50 *level playing field...for some*, Theme 2: *Complex to implement, but no lasting negatives*,
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54 Theme 3: *Why us? – the SDIL unfairly targets the drinks industry*, Theme 4: *The consumer is*
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56
57 *king*, and Theme 5: *The future of the SDIL*. The SDIL appeared to create a level playing field
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4 which industry accepted, however, this was perceived as inadequate due to the exclusion of
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7 milk-based drinks and targeting only SSBs, giving some a competitive advantage.
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10 Implementation of the SDIL was time consuming and complex, leading to high financial
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13 investment to prepare for it. Strategic response to the SDIL was dependent on leadership buy-
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16 in and particularly governed by potential consumer responses to product changes associated
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18
19 with the policy. The announcement and subsequent implementation of the SDIL caused a
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21
22 ripple effect beyond the soft drinks industry. The wider food and drink industry perceived it
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25 as evidence of the government being willing to regulate to help achieve health goals.
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34 *Strengths and limitations*

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36
37 The use of elite interviewing techniques to build relationships with and solicit meaningful
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40 responses from participants is a strength of this work. These techniques allowed us to obtain
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42
43 the views of senior professionals from commercial organisations who have often been
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45
46 difficult to recruit to other studies [39]. As evident from the challenges described in the out-
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49 of-home sector and supermarkets, including respondents outside of manufacturing allowed
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51
52 wider exploration of the systemic impacts of the SDIL. A limitation of this work, however, is
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55 that interviews were carried out over a long period of time due to challenges in recruitment.
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4 Therefore, not all participants experienced the same political context, such as Boris Johnson's
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6
7 threats to reverse the SDIL in July 2019. Initial plans were for longitudinal data collection
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9
10 repeated across the time period of the study. Had all participants been interviewed closer to
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12
13 the implementation of the SDIL in 2018, then repeated in 2020, perspectives on the political
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16 events occurring would have been captured from all participants. Unfortunately, challenges to
17
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19 recruitment and access to elite participants led to the abandonment of this plan. Although
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22 researcher neutrality was expressed to participants the position of interviewers as public
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25 health academics could have led to these recruitment challenges.
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34 The positionality of the researchers may also have led to censoring of responses by some
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37 participants. Whilst we sought to descriptively represent industry perspectives, as well as
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39
40 acknowledge our own biases that are typically pro-health policy, it is important to
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42
43 acknowledge that the food and drink industry will have their own biases against health policy
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45
46 that is detrimental to their business survival, as evidenced in previous work [40,41]. Although
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48
49 it was not the aim of the work to explore participant responses in relation to the commercial
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52 determinants of health, it is possible that participant responses did not represent the reality of
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55 what occurred behind the scenes in the food and drink industry in relation to the SDIL.
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4 Overlap between some of the responses provided in this work and the ‘typical’ responses
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7 explored by other researchers as an industry ‘playbook’ [42] may support this assertion.
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11 12 13 *Interpretation and implications* 14

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17 Interviewees reported that the technical aspects of drink production, particularly in the out-of-
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19
20 home sector, were not adequately accounted for in the design of the SDIL. An unintended
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23 consequence of the milk-based drink exclusion, led to some organisations having to interpret
24
25
26 the particulars of the SDIL whilst their queries to HMRC went unanswered. Experiences of
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28
29 participants in this work align with findings that UK Government policy is set up poorly for
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32 the purposes of adequate monitoring and evaluation [43]. Future policy should engage with
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35 the wider food and beverage sector once a policy is certain to be implemented, to design and
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38 communicate technicalities in ways that avoid industry having to interpret themselves what is
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41 required and provide timely responses to queries surrounding implementation. Further,
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44 respondents indicated that lobbying against the inclusion of milk-based sugar sweetened
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47 beverages in the SDIL resulted in this exclusion. Alongside policy engagement in the
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50 technicalities of production, an avenue for future research would be to understand in more
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3 detail the policy process surrounding the SDIL, particularly the influence of the food and
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7 drink industry on the policy particulars.
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13 Reviewing their product portfolio was also discussed, where assessments of the product mix
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16 as a whole and by individual product were conducted when determining the response to the
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19 SDIL. This aligns with previous findings that soft drink companies monitor their internal and
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23 external contexts to determine their products' market position in response to a stimulus such
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26 as the SDIL, and then respond with marketing or non-marketing activity to influence the
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29 purchasing of soft drinks [44]. A crucial external contextual component to response in our
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33 findings appears to be consumer response and preferences towards each product, as well as
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36 health as a whole.
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44 The UK soft drinks industry was reformulating products to lower sugar alternatives several
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47 years before the SDIL was introduced [44,45]. Perspectives expressed by participants align
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50 with this and suggest that there is a shift towards healthier drinks as the primary offer for
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53 consumers, with the SDIL accelerating the pace of this change. Consumer preferences for
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56 healthier products, and our finding that industry prioritises these health preferences in their
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4 decision making, are likely to have triggered the soft drinks industry to reformulate products
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6
7 prior to the announcement of the SDIL. The advocacy (e.g. Jamie Oliver and Action on
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10 Sugar) in the early 2010s [46–48] and government threats to regulate industry [49] may have
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12
13 also increased consumer awareness about the health impact of sugar consumption and had a
14
15
16 ‘signalling effect’ to consumers to reduce their sugar consumption [50]. Participants in our
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18
19 study suggested that the SDIL was adopted by the Government because of the existing
20
21
22 popularity of sugar reduction among the public. It is likely that the UK public was aware that
23
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25 SSBs harm health much earlier than the policy announcement, resulting from media activity,
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28 such as that related to Jamie Oliver’s campaigning [46] PHE’s [47] and WHO’s reports on
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31 sugar [48]. Therefore, the importance of public momentum towards health could be regarded
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34 as a trigger for industry action independently from encouraging government action via policy.
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44 Finally, participants expressed concern that policies introduced to combat obesity and other
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47 societal issues should be complementary not contradictory. The proposed ban on TV and
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50 online advertising of high fat, salt and sugar (HFSS) products by the UK Government [36]
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53 was viewed by industry to be misguided as they stated it may stop them being able to
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56 advertise their reformulated products; not just those impacted by the SDIL but products
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3 voluntarily reformulated which would still be classified as HFSS. Stakeholder requests for
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7 consistency across policy areas was also expressed by interviewees regarding this advertising
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10 ban [51]. This indicates that a more consistent approach to determining which products
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13 government wants industry to change would help ensure policies do not undermine one
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17 another and build trust in government amongst industry.
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23 **Conclusion**

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27 This study explored food and drink industry perspectives on the SDIL. We found that
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30 industry accepted that legislation was useful in levelling the commercially competitive
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33 playing field. However, in practice participants stated that the SDIL had not created a 'true'
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35
36 level playing field as little consideration had been given to excluded product categories
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39 during policy design. Technical aspects of implementation were not adequately included and
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41
42 led to complexity for out of home retailers. Legislation on SSBs needs to take account of all
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45 industry sectors it affects, including out of home retail, as well as the manufacturing sector.
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49 Participants stated that only targeting sugary soft drinks was unfair due to the progress
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52 already made in the category compared to others (e.g., confectionary). The critical role of
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57 consumers in creating momentum towards sugar reduction in SSBs prior to the SDIL
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4 announcement, as well as dictating response to the SDIL was discussed. It is hypothesised
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7 that pro-health public views could be a useful lever in encouraging positive industry action
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10 independently of food and drink regulation. The impact of the SDIL was felt beyond the soft
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13 drinks industry, driving other product sectors to reformulate in anticipation of future
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16 regulation.
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23 **Acknowledgements:** For the purpose of Open Access, the author has applied a Creative
24
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33 **Competing interests:** None.
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40 **Contributors:** Dr. Catrin P Jones: Conceptualization, Methodology, Formal analysis,
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43 Investigation, Data Curation, Writing - Original Draft, Project administration. Dr. Hannah
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46 Forde: Formal analysis, Writing - Review & Editing. Dr Tarra L. Penney: Conceptualization,
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49 Methodology, Investigation, Data Curation, Writing - Review & Editing, Funding
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53 acquisition. Dr. Dolly R. Z. Theis: Formal analysis, Writing - Review & Editing
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3 Prof. Steven Cummins: Conceptualization, Methodology, Formal analysis, Writing - Review
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6
7 & Editing, Supervision, Funding acquisition. Prof. Jean Adams: Formal analysis, Writing -
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10 Review & Editing, Funding acquisition. Dr. Cherry Law: Formal analysis, Writing - Review
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13 & Editing. Prof. Harry Rutter: Formal analysis, Writing - Review & Editing, Funding
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16 acquisition. Prof. Richard Smith: Formal analysis, Writing - Review & Editing, Funding
17
18 acquisition. Prof. Martin White: Conceptualization, Methodology, Resources, Supervision,
19
20
21 Project administration, Funding acquisition, Formal analysis, Writing - Review & Editing.
22
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29

30 **Funding:** This project was funded by the NIHR Public Health Research programme (Grant
31
32
33 Nos. 16/49/01 and 16/130/01). At the time this study was conducted CPJ, MW, ELR, HF,
34
35
36 TLP, DT, JA, OA, SA, were also supported in part by: Programme grants to the MRC
37
38
39
40
41 Epidemiology Unit from the Medical Research Council (grant No. MC_UU_12015/6 and
42
43
44 MC_UU_00006/7); and the Centre for Diet and Activity Research (CEDAR), a UKCRC
45
46
47
48 Public Health Research Centre of Excellence – funding from the British Heart Foundation,
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1
2
3 funding for her PhD studentship from the Economic and Social Research Council and Public
4
5
6
7 Health England, and she has received further discretionary funding from the Economic and
8
9
10 Social Research Council and Murray Edwards College, Cambridge. The views expressed are
11
12
13 those of the authors and not necessarily those of the any of the above-named funders. The
14
15
16 funders had no role in study design, data collection and analysis, decision to publish, or
17
18
19 preparation of the manuscript.
20
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27 **Data availability statement:** To maintain participant anonymity and confidentiality, data is not
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30 available due to the identifiable nature of participants from transcripts and recordings.
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37 **Ethics approval statement:** The study was approved by the Humanities and Social Science
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40 Ethics Committee at the University of Cambridge, UK (no approval ID was provided).
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Supplementary File 1: Researcher Reflexivity

Braun and Clarke discuss reflexivity as a fundamental characteristic of thematic analysis, involving critical reflection of researcher perspectives, and how these will be integrated within the analysis and interpretation of data [22]. The complete elimination of bias is not something that can be achieved in qualitative research and more importantly should not be an aim. Unlike statistical analysis, the researcher is the tool of analysis. The researcher therefore is an integral part of the analytic process and to conduct qualitative thematic analysis well, they must develop an understanding of how their own perspectives, position and view of reality helps illuminate will influence the analysis [22].

This study aimed to centre participants' words in a descriptive manner to preserve their intention. This approach was also chosen due to reflection by the research team on our positionality as public health academics. We aimed to understand industry perspectives regarding the SDIL; however, it is important to acknowledge that the personal and professional goals of the research team (authors on this paper) as public health researchers are likely to be different from those of people working in the food and drink industry. Therefore, a descriptive approach was selected which prizes participants' words and perspectives over and above researcher interpretations. Whilst our perspectives have still influenced the analysis, as they should in good qualitative practice, we sought to minimise the influence of our biases and negativity towards some of the practices of the food and drink industry, to truly 'listen' to the perspectives of our participants. As a result, a modified version of Braun and Clarke's thematic analysis was used; reflexivity was a priority throughout the analysis in line with the approach however we sought to be less interpretive than their more recent guidance proposes [22].

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6 It is also important to note that, although we have taken a descriptive approach, the results
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8 represent participant perspectives. Whilst the researchers work to put aside their biases which
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10 may lean towards those more critical of the food and drink industry; statements, findings and
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12 themes found do not represent an objective truth, rather the reported perspectives of
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14 participants. We urge readers of this work to use their own critical reflection when
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16 interpreting and using these findings.
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COREQ (COnsolidated criteria for REporting Qualitative research) Checklist

A checklist of items that should be included in reports of qualitative research. You must report the page number in your manuscript where you consider each of the items listed in this checklist. If you have not included this information, either revise your manuscript accordingly before submitting or note N/A.

Topic	Item No.	Guide Questions/Description	Reported on Page No.
Domain 1: Research team and reflexivity			
<i>Personal characteristics</i>			
Interviewer/facilitator	1	Which author/s conducted the interview or focus group?	
Credentials	2	What were the researcher's credentials? E.g. PhD, MD	
Occupation	3	What was their occupation at the time of the study?	
Gender	4	Was the researcher male or female?	
Experience and training	5	What experience or training did the researcher have?	
<i>Relationship with participants</i>			
Relationship established	6	Was a relationship established prior to study commencement?	
Participant knowledge of the interviewer	7	What did the participants know about the researcher? e.g. personal goals, reasons for doing the research	
Interviewer characteristics	8	What characteristics were reported about the interviewer/facilitator? e.g. Bias, assumptions, reasons and interests in the research topic	
Domain 2: Study design			
<i>Theoretical framework</i>			
Methodological orientation and Theory	9	What methodological orientation was stated to underpin the study? e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis	
<i>Participant selection</i>			
Sampling	10	How were participants selected? e.g. purposive, convenience, consecutive, snowball	
Method of approach	11	How were participants approached? e.g. face-to-face, telephone, mail, email	
Sample size	12	How many participants were in the study?	
Non-participation	13	How many people refused to participate or dropped out? Reasons?	
<i>Setting</i>			
Setting of data collection	14	Where was the data collected? e.g. home, clinic, workplace	
Presence of non-participants	15	Was anyone else present besides the participants and researchers?	
Description of sample	16	What are the important characteristics of the sample? e.g. demographic data, date	
<i>Data collection</i>			
Interview guide	17	Were questions, prompts, guides provided by the authors? Was it pilot tested?	
Repeat interviews	18	Were repeat interviews carried out? If yes, how many?	
Audio/visual recording	19	Did the research use audio or visual recording to collect the data?	
Field notes	20	Were field notes made during and/or after the interview or focus group?	
Duration	21	What was the duration of the interviews or focus group?	
Data saturation	22	Was data saturation discussed?	
Transcripts returned	23	Were transcripts returned to participants for comment and/or	

Topic	Item No.	Guide Questions/Description	Reported on Page No.
		correction?	
Domain 3: analysis and findings			
<i>Data analysis</i>			
Number of data coders	24	How many data coders coded the data?	
Description of the coding tree	25	Did authors provide a description of the coding tree?	
Derivation of themes	26	Were themes identified in advance or derived from the data?	
Software	27	What software, if applicable, was used to manage the data?	
Participant checking	28	Did participants provide feedback on the findings?	
<i>Reporting</i>			
Quotations presented	29	Were participant quotations presented to illustrate the themes/findings? Was each quotation identified? e.g. participant number	
Data and findings consistent	30	Was there consistency between the data presented and the findings?	
Clarity of major themes	31	Were major themes clearly presented in the findings?	
Clarity of minor themes	32	Is there a description of diverse cases or discussion of minor themes?	

Developed from: Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*. 2007. Volume 19, Number 6: pp. 349 – 357

Once you have completed this checklist, please save a copy and upload it as part of your submission. DO NOT include this checklist as part of the main manuscript document. It must be uploaded as a separate file.