



Parents' and carers' awareness and perceptions of UK supermarket policies on less healthy food at checkouts: A qualitative study

Allison Ford^{a,*}, Douglas Eadie^a, Jean Adams^b, Ashley Adamson^c, Martin White^b, Martine Stead^a

^a Institute for Social Marketing, University of Stirling, Stirling, FK9 4LA, UK

^b Centre for Diet and Activity Research, MRC Epidemiology Unit, University of Cambridge, UK

^c Fuse—the Centre for Translational Research in Public Health and Institute of Health & Society, Newcastle University, UK

ARTICLE INFO

Keywords:

Food policy
Supermarkets
Checkouts
Qualitative
Parents
Children

ABSTRACT

Background: In the retail environment strategic placement of food influences purchasing. Foods placed at checkouts have tended to be less healthy. In response to consumer concern some UK supermarkets voluntarily committed to removing less healthy food from their checkouts. We explored qualitatively the perceptions and experiences of parents and carers of younger children regarding food at supermarket checkouts, supermarket checkout food policies, and other supermarket stimuli which influences purchasing.

Methods: Twelve focus groups were conducted in urban central Scotland with 91 parents/carers of primary school aged children (aged 5–11 years).

Results: The availability of less healthy foods at checkouts was perceived as problematic, encouraging purchase requests by children and impulse buys by adults. Parents/carers were aware of a change in some supermarkets where less healthy foods had been replaced with healthier items and they were supportive of supermarket policies that placed restrictions on checkout food. Many parents/carers welcomed product-free checkouts, however the whole supermarket was perceived as manipulative and stimulating.

Conclusion: Voluntary supermarket policies which clearly and consistently restrict the placement of less healthy foods at checkouts have been welcomed by parents/carers of young children. Given that marketing strategies throughout the whole supermarket were viewed as problematic, public health policymakers and advocacy groups may want to encourage supermarkets to develop broader policies to support healthier food purchasing.

1. Introduction

A healthy diet is important for the prevention of chronic diseases including cardiovascular disease, diabetes, certain cancers and obesity (Harding et al., 2008; Swinburn et al., 2007; Vergnaud et al., 2012; Wang et al., 2014). Socio-ecological approaches seek to identify the multiple influences that shape food choices, looking beyond individual determinants of diet and obesity to stimuli within our surroundings (Cohen & Farley, 2008; Penney et al., 2015). In the supermarket environment, multiple techniques are used by manufacturers and retailers to encourage purchases, typically of foods high in fat, salt and sugar (Sparks & Burt, 2017). One such technique is placement. Placing items in strategic locations such as at the ends of aisles or in special displays makes them more visible and tempting to shoppers and takes advantage of the tendency for food purchase choices to be made intuitively rather than deliberately (Cohen et al., 2015; Schroder & Lyon, 2013). The checkout or cash register is a particularly important location for

placement of items designed to trigger impulse purchases (Dixon, Scully, & Parkinson, 2006; Thornton et al., 2012; Campbell et al., 2014; Cohen & Babey, 2012). Research suggests that shopping is a 'cognitively depleting activity' which places multiple demands on consumers' self-control, meaning that by the time they reach the checkout they are particularly vulnerable (Cohen et al., 2015). Foods displayed at checkouts tend to be less healthy – typically, confectionery and salty snacks – and displayed to encourage impulse purchases and child purchasing requests, which parents can find hard to resist (Dixon et al., 2006; Thornton et al., 2012; Campbell et al., 2014). Around 80% of foods displayed at UK supermarket checkouts were considered unhealthy in 2014–15 (Horsley et al., 2014; Wright et al., 2015).

Prior to this research, there had been limited government action to support and encourage healthier supermarkets in the UK. In 2011 the government launched a voluntary public-private partnership with a range of commercial food organisations. A number of 'pledges' were developed focusing particularly on food labelling; salt, calorie and

* Corresponding author. Institute for Social Marketing, University of Stirling, Stirling, FK9 4LA, UK.

E-mail address: a.j.ford@stir.ac.uk (A. Ford).

<https://doi.org/10.1016/j.appet.2019.104541>

Received 5 August 2019; Received in revised form 31 October 2019; Accepted 25 November 2019

Available online 26 November 2019

0195-6663/ © 2019 The Authors. Published by Elsevier Ltd. This is an open access article under the CC BY license (<http://creativecommons.org/licenses/by/4.0/>).

saturated fat reduction; and fruit and vegetable promotion. No pledges specifically referred to supermarket organisation or checkouts, and evaluation indicated that the implementation of many actions pledged may have predated the partnership (Knai et al., 2015). However, in response to consumer concern, campaigns by advocacy groups and negative media coverage (Delmar-Morgan, 2013; Children's Food Campaign, 2012), some UK supermarkets voluntarily committed to removing less healthy food from their checkouts in the past few years, with implementation of these policies mostly occurring in the period 2013–2017 (Ejlervskov et al., 2018a).

We conducted two previous studies examining the implementation and impact of these UK policies. Firstly, we conducted an observational study to assess the nature of checkouts policies and whether there was a relationship between the nature of a policy and the checkout foods on display (Ejlervskov et al., 2018a). A summary of the different policies is presented in Table 1.

We conducted observations in 69 stores in the East of England, including four to five stores of each format (e.g. city centre convenience store, out of town hypermarket etc.) operated by each of nine supermarket chains which together account for more than 90% of the UK grocery market. Checkout areas were defined as 'any compulsory areas that shoppers had to pass through to pay for their goods, as defined in previous studies' (Horsley et al., 2014; Wright et al., 2015). This included self-service checkouts, self-scan checkouts and payment points placed anywhere in stores. Food and non-alcoholic drink products within arm's reach (approximately 70 cm) of any point from where customers entered, to where they exited the checkout area, was defined as checkout food. We found that where supermarket policies were clear in terms of what products should and should not be displayed, and consistently applied to all checkouts in stores, as opposed to vague, inconsistent or absent, fewer foods were displayed and a lower proportion of these were 'less healthy'. 'Less healthy' foods were those identified as high in fat, salt or sugar by the UK Food Standards Agency's Nutrient Profiling Model (Department of Health, 2011). Secondly, we conducted time-series analyses of purchase data to assess any impact of checkouts policies on purchases. These analysis indicated that policy implementation was associated with a 17% reduction in purchases of less healthy foods which are typically displayed at checkouts (i.e. small portions of sugary confectionary, chocolate and potato crisps) in the four weeks after implementation (Ejlervskov et al., 2018b). At one year post intervention, a 15% reduction in purchasing was still present. However, it was not possible to detect where in the store products had been bought from, meaning that we could not be entirely certain that the changes observed in purchasing reflected changes in purchasing behaviour at checkouts specifically.

To fully understand how checkout policies might influence consumer attitudes and purchasing of less healthy foods, it is important to explore the perspectives of consumers themselves. Previous qualitative research with adult consumers has found that they experience frequent temptation when shopping and feel a need to exert constant effort and discipline to avoid less healthy choices (O'Brien et al., 2014). These mental struggles are likely to be intensified when people are shopping with children, because of the additional pressure of managing purchase requests from children. (Dixon et al., 2006) Parents and carers who frequently shop with children are a particularly important group, therefore, for checkouts policies. Research conducted in Australia and Denmark has found that there is support among parents for confectionery-free checkouts (Campbell et al., 2014; Kelly et al., 2009; Winkler et al., 2016). An exploration of parents' and carers' perspectives can shed light on the mechanisms by which checkout policies might influence behaviour by identifying the features and characteristics of checkouts that are seen to encourage impulse purchasing and purchasing requests. It is also important to explore what modifications and policies parents and carers might support in the supermarket environment to reduce exposure to stimuli that encourage unplanned purchases.

We aimed to build on our previous two studies (Ejlervskov et al., 2018a, 2018b) and explore qualitatively the perceptions and experiences of parents and carers of primary school age children regarding food at supermarket checkouts, their awareness of and attitudes towards checkout food policies implemented in UK supermarkets over the past five years, and whether they felt that such policies are helpful in terms of reducing impulse purchasing and purchase requests by children. We also explored parents' and carers' views on what else supermarkets could do to help them when shopping with children in terms of reducing exposure to stimuli that might trigger impulse purchases and purchasing requests for less healthy foods.

2. Methods

2.1. Design and sample

Twelve focus group discussions were conducted with parents/carers of primary school children aged 5–11 years ($n = 91$). Evidence suggests that younger children are a vulnerable population due to their cognitive development and limited cognitive strategies to resist marketing techniques (Campbell et al., 2014; Harris, Brownell, & Bargh, 2009; Kunkel et al., 2004). Focus groups were chosen to encourage participants to engage with each other and to express their views in an open discussion. All participants were recruited as regular shoppers in at least one of the nine UK supermarket chains examined in the previous studies (Ejlervskov et al., 2018a, 2018b). We ensured that within each group of participants, there was experience of at least four different supermarket chains. Evidence suggests that children from one-parent households may have more influence on family purchase decisions than their counterparts in dual parent families (Kaur & Singh, 2006), and that lower income parents may be more likely to acquiesce to children's purchase requests for less healthy foods in order to avoid stressful situations and prevent their children from appearing different to others (Horsley et al., 2014; Davison et al., 2015; Fisher et al., 2015; Hamilton, 2009; Hamilton & Catterall, 2006). Therefore focus groups were stratified according to single/dual parent status and social grade (ABC1/C2DE) of participants, as well as location (Table 2) (National Readership Survey, 2016). ABC1 reflects middle class occupations: managerial, administrative and professional occupations. C2DE reflects working class occupations: skilled and unskilled manual workers, and casual or lowest grade workers. Each group was attended by seven or eight participants.

All parents/carers were purposively recruited from within three urban areas in central Scotland (west, central and east) by independent professional market research recruiters using a combination of door knocking and street intercepts. These urban areas were chosen to enable an adequate cross-section of parent status and social grade to be achieved. Targeting these well-populated locations also allowed the sample to have access to a broad range of supermarkets. Eligibility was assessed using a structured screening questionnaire. Participants who met the recruitment criteria were provided with a study information sheet and then followed up within three days to answer any questions and to seek written consent to participate. Participants received a small cash sum as a gesture of thanks and to cover any associated travel and child minding costs. The study was approved by the Department of Psychology Research Ethics Committee at the University of Cambridge.

2.2. Procedure

The focus groups were conducted in April and May 2018 in informal community venues. Each group lasted up to 90 min and was moderated by one of the authors (AF, DE and MS) using a semi-structured topic guide, administered flexibly to give participants freedom to express their views. The topics explored included: parents/carers' views and experiences of supermarket checkouts and food and other checkout products; the engagement of children with checkout food and other

Table 1
UK supermarket policies on checkout food, May–July 2017.

Super-market	Store format	Products removed	Suggested replacement products	Checkouts where policies apply	Year of policy implementation	Policy category ^a
A	Hypermarket	Sweets and chocolate	Healthier snacks such as dried fruit, nuts and cereal bars. These should either be one of your 5-a-day, have no 'red' traffic light ratings, be in calorie controlled snack packs, or be deemed by the Department of Health to be a 'healthier snack'. (annual report, own web page)	All checkouts	2015 (January)	Clear and consistent
	Large supermarket Small supermarket Convenience store Large supermarket	Confectionery	Not stated	Main checkouts where a family are expected to shop with a trolley	2004	Vague or inconsistent
C	Convenience store Large supermarket	No policy Limits display of confectionery treats to one in three checkouts	No policy "Guilt free" checkouts (not defined)	No policy 1/3 of checkouts	N/A 2012	No policy Vague or inconsistent
	Large supermarket	Sweets and chocolate	Range of alternative snacks, including fruit, nuts and bottled water	Main bank checkouts (directly at the till)	2016 (February)	Vague or inconsistent
E	Large discount supermarket	Confectionery, chocolate and sweets	Healthier options including dried fruit, nuts, juices and water	All checkouts	2015 (January)	Clear and consistent
	Convenience store Large supermarket	No policy Sweets	No policy Not stated	No policy All checkouts	N/A 2014 (August)	No policy Vague or inconsistent
H	Convenience store	Sweets	Not stated	All checkouts, except in stores with petrol stations	2014 (August)	Vague or inconsistent
	Large discount supermarket Convenience store	Sweets and chocolate Confectionery, crisps, cakes and biscuits	More nutritious options such as dried fruits and nuts, seeds, fresh fruit and fruit juices Not stated	All checkouts	2014 (January)	Clear and consistent
I	Convenience store			All checkouts in stores owned by company, not in franchise stores	2015 (September)	Vague or inconsistent

(adapted from Ejlerskov et al. (Ejlerskov et al., 2018a)).

^a As assessed by the study researchers.

Table 2
Parents/carers focus groups sample.

Group	Parental status ^a	Social grade ^b	Location
1	Single parents/carers	ABC1	Urban west
2	Single parents/carers	ABC1	Urban central
3	Single parents/carers	ABC1	Urban east
4	Single parents/carers	C2DE	Urban west
5	Single parents/carers	C2DE	Urban central
6	Single parents/carers	C2DE	Urban east
7	Non-single parents/carers	ABC1	Urban west
8	Non-single parents/carers	ABC1	Urban central
9	Non-single parents/carers	ABC1	Urban east
10	Non-single parents/carers	C2DE	Urban west
11	Non-single parents/carers	C2DE	Urban central
12	Non-single parents/carers	C2DE	Urban east

^a Parents/carers were required to have a least one child in the qualifying age range who spent a minimum of two nights a week in the parent/carers home. Parents/carers included step-parents, foster parents and grandparents with significant caring responsibilities.

^b Standard classifications used. ABC1 = middle class; AB (Higher & intermediate managerial, administrative, professional occupations); C1 (Supervisory, clerical & junior managerial, administrative, professional occupations). C2DE = working class; C2 (Skilled manual occupations); DE (Semi-skilled & unskilled manual occupations, unemployed and lowest grade occupations).

products; in-store food promotions; and supermarket shopping with children more generally. Each group began with a wide-ranging exploratory discussion of how parents/carers felt about shopping with children in supermarkets, why they chose to frequent particular supermarkets, what differences they perceived between supermarkets, and what aspects of supermarkets they welcomed or perceived as problematic for themselves or when with children. We assessed awareness of checkout policies at both spontaneous and prompted levels. Spontaneous mentions of checkouts and/or checkout policies provided an insight into the extent to which these were salient issues to parents/carers and strength of feelings. Later in the discussions parents were provided with brief information about the different supermarket policies and asked for their views. Groups were encouraged to think about all checkout types. However, as checkout foods were mostly found at staffed checkouts rather than self-scan checkouts, most of the discussion focused on these. The discussions also sought parents' views of voluntary and compulsory restrictions on in-store placement and promotion of foods. All discussions were digitally audio-recorded with participants' consent.

2.3. Analysis

All discussions were transcribed in full for coding and analysis was facilitated by the use of Nvivo11. Thematic analysis used a deductive and inductive approach (Braun & Clarke, 2006). An initial set of themes based on the core questions and topic areas was agreed among the research team. The reliability of these themes was then assessed by a process of familiarisation with the transcript texts and cross-examination. Discussions between researchers enabled identification of further emerging themes and resolution of interpretive difference. These analyses allowed the team to identify patterns across the data as a whole and any differences between subgroups of parents, for example by social grade and single parent/non-single parent status. Generally, few differences emerged by social grade, parent status, or location; however, where differences existed these are noted in the results section.

3. Results

Parents' and carers' perceptions and attitudes towards checkout food items and supermarket checkout policies were underpinned by two key themes, the healthiness of snack food items and participants'

susceptibility to impulse purchases at the checkout. These two themes are outlined first below, followed by findings relating to parents'/carers' awareness and perceptions of checkout food policies, their views on restrictions on checkout food, and consideration of checkouts and checkout food policies in the wider supermarket context.

3.1. Healthiness of snack and checkout food

Parents'/carers' narratives around snack food generally, and by association, the food available at supermarket checkouts, focused on the healthiness of these items and highlighted that this was a concerning issue for them. Although snack foods were often referred to as 'treats', they were not foods consumed by children occasionally. Rather, parents/carers deemed snacks a daily element of their children's diets, as a morning school snack, as part of a packed lunch, to alleviate after school hunger, or to help parents and children manage subsistence around after school activities. As one parent noted:

"My kids say 'can I have a treat?' and I'm like 'well it's not a treat because it's not something that's not all the time and you are having it all the time, you're having that more than fruit.' It's that expectation." (Single parent/carer, C2DE, urban east)

The perceived unhealthiness of much snack food, including those traditionally available at checkouts, was concerning for parents/carers and was associated with foods high in fat and salt, but especially high in sugar. Confectionary snacks such as sweets, chocolate and cakes, and sugary fizzy drinks, were consistently regarded by parents/carers as less healthy checkout items. The availability of child-targeted products thought to be especially high in sugar content and seasonal confectionary items at the checkout were also perceived by parents as problematic. The placement of such items was spontaneously identified in most group discussions as one factor which added to the stressfulness of shopping with children and, generally, parents/carers were mindful that their children's consumption of such foods impacted on the overall health of their children's diets.

"It's always at the back of my mind, 'is that healthy or not?' and to be honest most of the time it's not really." (Single parent/carer, ABC1, urban east)

"I'm aware that I'm feeding my son quite a lot of sugary, and occasionally, salty products" (Single parent/carer, ABC1, urban east)

Many of our parents/carers described difficulty in finding healthy snacks that were also appealing to their children, particularly children described as 'fussy eaters'. Checkout items considered healthier included foods which were typically cereal-, fruit- or vegetable-based and non-sugary drinks such as water. However, many also expressed concern and confusion over the sugar content of cereal bars and dried fruit, perceived to be marketed and packaged as healthier alternatives to confectionary.

"My kids are at the stage of being really busy and so snacking seems [inevitable] ... but trying to find a good snack, because you feel like dried fruit has got lots of sugar in it and then cereal bars have lots of sugar." (Non-single parent/carer, ABC1, urban east)

"You get those shaker pouch things and they are ideal for a school lunchbox but it's got like chocolate buttons and things in it. I just don't understand. Things like that confuse me because I think right that probably is quite healthy, even though I know it's got chocolate buttons in it." (Single parent/carer, ABC1, urban east)

"The snacking thing is quite hard ... you look down the content and you're like 'oh actually I'm thinking yogurt coated blueberries is really healthy' and actually it's totally not." (Non-single parent/carer, ABC1, urban east)

Parents'/carers' concern over the healthiness of snacks was often

related to the pressure they felt to make healthy food choices for their children: “there is a lot of pressure I feel as a parent” (Non-single parent/carer, ABC1, urban west). This pressure sometimes came from their child’s school, with some schools checking and prohibiting less healthy snacks and packed lunch items – “the school is checking their packed lunches sometimes ... for the healthiness” (Non-single parent/carer, ABC1, urban west) – and also from media reports around diet and food: “the media and stuff, they speak about the sugar” (Non-single parent/carer, ABC1, urban east).

3.2. Susceptibility to impulse purchases at the checkout

Many parents/carers acknowledged that they were susceptible to making impulse purchases of confectionery and snacks, both for themselves and in response to requests from their children – “It’s just temptation for me and him” (Single parent/carer, C2DE, urban west) – resulting in unplanned expenditure and unnecessary purchases:

“It’s at the checkout you always have that wee kind of impulse buy at the end.” (Non-single parent/carer, ABC1, urban west)

The physical features of checkouts made it difficult for parents to take pre-emptive action of the sort they might deploy elsewhere in the supermarket to fend off purchase requests, such as keeping children distracted or avoiding particular areas: “You’re not going anywhere at the checkout, you can move away from an aisle but ... everyone’s got to go through the checkout” (Non-single parent/carer, C2DE, urban east). At checkouts parents spoke of being “confined”, with eyelevel placement of products tempting children to “grab the sweeties” (non-single parent/carer, ABC1, urban central), particularly for products perceived as targeted at children, such as those featuring cartoon characters on the packaging, toy tie-ins and collector cards, which stimulated children to make persistent purchase requests.

“Like [children’s dried fruit snack] ... with characters on them and all that kind of nonsense.” (Single parent/carer, C2DE, urban east)

Queuing at the checkout prolonged exposure to products and increased boredom among children. Parents spoke of having lower mental and emotional energy to counter children’s requests at the checkout as resistance reserves had been depleted by earlier battles in the store, and the temptation to succumb was exacerbated by the presence of other customers. Embarrassment was experienced by both single and non-single parents, of both social grades:

“If your child is screaming for this bit of chocolate at the till, you’re trying to get out, I know I would just say ‘take it, take whatever you want, I want out of here’ because you’re getting embarrassed, you’re getting flustered, you know, people are behind you.” (Non-single parent/carer, ABC1, urban east)

Tempting foods at checkouts were perceived to increase children’s expectations of a ‘reward’ or ‘treat’ for having reached this point in the shopping trip, although parents acknowledged that they colluded in fostering such expectations themselves – one, for example, described “bribing” all the way round, “just wait until we get to the checkout, wait until we get to the checkout and then you can pick your sweet at the checkout” (Single parent/carer, ABC1, urban west)

3.3. Awareness and perceptions of checkout food policies

Most participants were aware of a change in product availability at checkouts in the past few years in some supermarkets. Several commented unprompted that they had noticed checkouts becoming ‘better’: “It doesn’t seem as mercenary as it used to, almost every supermarket there was tons of sweets while you were waiting” (Single parent/carer, C2DE, urban east). Where changes were noticed, participants generally perceived that food items such as confectionery had been replaced with seemingly healthier options or removed altogether. Only a small

minority of participants had not noticed any difference or felt that the range of confectionery had increased. There was uncertainty whether these were the result of legislation or voluntary action by supermarkets. Either way, changes were perceived to have been driven by increasing media, public and government concern about childhood sugar intake and obesity.

Parents were generally aware of differences between supermarket approaches, although perceptions sometimes varied within and across groups. Three supermarkets (supermarkets A, E, H – see Table 1), however, were consistently noted, both spontaneously and when prompted, to have a distinct approach to checkout foods. In the earlier observational study these were the only three supermarkets assessed as having ‘clear and consistent’ policies (Ejlerskov et al., 2018a). One of the three, a large multinational grocery retailer (supermarket A), was described by some parents as having removed products from checkouts completely, although other parents thought that less healthy food products had been replaced by ‘healthier’ items: “Cereal bars and stuff like that” (Non-single parent/carer, C2DE, urban west). The other two supermarkets (supermarkets E and H) recognised as having ‘better’ checkouts were both discount, ‘no frills’ chains whose checkouts stood out as noticeably different, with own-brand ‘healthy’ snacks, water, hand sanitiser, paracetamol and other adult-targeted products: “Pea crisps, like everything’s very healthy at their tills” (Single parent/carer, ABC1, urban west).

Conversely, other supermarkets were viewed as having done little or nothing to improve the healthiness of their checkout foods. Again, parents’ perceptions were generally consistent with the findings of our observational study which found that these supermarkets had either no policies or ‘vague or inconsistent’ policies (Ejlerskov et al., 2018a). A supermarket assessed as having no policy (supermarket F) was criticised by parents/carers for the prominent display of bakery goods and confectionery near and at its checkouts. A multinational clothing and food retailer with an upmarket image (supermarket I) whose policy (assessed as vague or inconsistent) was particularly criticised for its queue management system which corralled customers between low gondola displays of confectionery, cakes and snacks, en route to the till:

“If you’ve got a basket and you’re waiting, you’re almost in a kind of holding pen where you have to go, and the entire length of it is usually sweets ... it means you’ve then got to run this gauntlet ...” (Single parent/carer, ABC1, urban east)

Parents were similarly critical of a supermarket that claimed to have a policy of ‘guilt-free’ checkouts (i.e. displays of confectionery to be limited to one in three checkouts), expressing disbelief that the policy was implemented meaningfully in reality and singling out the store for its prominent placement of products with particular child appeal (supermarket C).

“[Supermarket C] is bad for their [placement of children’s chocolate product] which my son loves. And they have them at every checkout, even at the self-serve bit, and they’re placed just at their eyelevel if they’re sitting in the trolley.” (Non-single parent/carer, ABC1, urban east)

3.4. Views on restrictions on checkout food

Most parents and carers were supportive of restrictions on less healthy foods at checkouts; some were neutral on the issue, and none expressed opposition to such restrictions. Those supermarkets that displayed healthier snacks, non-food products or no products at all at checkouts were generally praised for doing so, and while none of the participants said that a supermarket’s checkout food policy would in itself encourage them to favour it over another supermarket, it was apparent that having a ‘healthier’ policy contributed to overall favourable attitudes regarding the store:

"I think it's a positive thing overall, they're showing to be kind of making an effort" (Non-single parent/carer, ABC1, urban west).

The healthier snack products displayed by supermarkets with clear and consistent checkout food policies (supermarkets A, E, H) were perceived as unlikely to attract children's interest, because they were not intrinsically appealing to children were not in child-targeted packaging or were not brands children were likely to recognise. Parents commented that, in the unlikely event their children did ask for such items, they would be happier to purchase them as they were a reasonable price and appeared less unhealthy than conventional confectionery. Being able to offer a healthier product at the checkout evoked "slightly less of the guilt, you know" (Non-single parents/carers, ABC1, urban east) and also fulfilled the desire to reward and treat:

"Then if you get to the till it's a positive experience because you can go 'go on choose something here, you can have that dried fruit and a bottle of water. I'm such a good mum.'" (Non-single parents/carers, ABC1, urban east)

Where items such as cereal bars and dried fruit had replaced confectionery, a perception that these products were misleadingly packaged as 'healthy' fed into wider scepticism among a minority of our sample that checkout food policies were simply a tokenistic public relations exercise: "I think they're trying to kind of jump on the healthy bandwagon" (Non-single parents/carers, ABC1, urban west).

Many participants said they would actually welcome 'nothing' at the checkout, reducing the opportunity for children to request products, reducing temptation for themselves, and making the final stage of the supermarket visit easier.

"I quite like the idea of just going through, shopping up, there's nothing else, we've had the 29 arguments throughout the store and it's just time to go." (Single parent-carer, ABC1, urban west)

Others, however, felt that it was appropriate and acceptable to have some products at the checkout, either because it was nice to have a treat after the shopping experience or as a useful reminder of items such as water, batteries, paracetamol and voucher cards.

3.5. Checkouts and checkout food policies in the wider supermarket context

Views on supermarket checkouts and the food at them need to be considered in the context of the wider supermarket. In talking about shopping with children more generally, parents/carers in our sample described the whole supermarket experience as a powerful mix of elements that combined to stimulate, manipulate and overcome resistance. Noting that they themselves, as adults, found it hard not to succumb - "You'll spend £15 more than you were going to spend every day ... They're winning" (Non-single parent/carer, C2DE, urban east) - participants acknowledged that the effect on children must be overwhelming:

"When I was a kid there was not that much temptation ... Whereas they've got aisles of toys ... snacks that are designed for kids ... which you end up paying extra for." (Single parent/carer, C2DE, urban east)

"You're going once a week to this place and this place is amazing. That's like going a trip to the zoo every week. It's amazing if you're that [i.e. child] size." (Single parent/carer, ABC1, urban central)

Strategic product placement was one of participants' main concerns. Some commented that while less healthy foods may have been removed from checkouts in some supermarkets, they were still prominent at entrances, ends of aisles and in promotional displays. Price offers around the store were also thought to be disproportionately focused on less healthy food.

"When you go in the middle aisle, you see all these chocolates and

promotions, it's as if they've just moved it from the till point and put it in the middle section." (Non-single parent/carer, ABC1, urban west)

"It's either towards the front when you're paying, just in case you've said no at the sweet aisle ... end aisles, even the front of the store if you're maybe just nipping in. It's really everywhere." (Non-single parent/carer, ABC1, urban east)

Although participants varied in the extent to which they felt supermarkets had a responsibility to facilitate less stressful navigation for shoppers with children, they offered several suggestions for further policies and actions which could be helpful. Given that several parents described planning their route around the supermarket to avoid specific aisles that they knew would trigger purchase requests and arguments, they were particularly irritated when products also appeared in unpredictable locations such as ends of aisles or temporary displays, rendering evasive action impossible. There was therefore widespread support for the idea, spontaneously voiced in several groups, that supermarkets should restrict placement to designated aisles: "Put the sweets in the sweetie aisle and that's where they stay" (Non-single parent/carer C2DE, urban east). Checkout-related suggestions included installing interactive games at the checkout to help keep children occupied, offering children rewards such as stickers for having completed a health-related task around the store, and having water and/or free pieces of fruit (already available at the store entrance at one large retailer) at the checkout. Parents and carers noted that implementing suggestions such as these would be perceived as 'nice gestures' sending the message that families were welcome in, and valued by, supermarkets:

"If they're [supermarkets] thinking 'right we want kids and families to shop here, to feel comfortable coming here' then they are going to think about things like that." (Non-single parent/carer, ABC1, urban west)

4. Discussion

This qualitative study provided insight into parents/carers' perceptions and experiences of supermarket checkout food and policies. We found that: (1) the availability of less healthy foods at checkouts was perceived as problematic, encouraging susceptibility to purchase requests by children and impulse buys by adults; (2) parents/carers were aware that confectionery items at the checkout had been replaced in the past few years with healthier items in some supermarkets; (3) parents/carers were supportive of supermarket policies that placed restrictions on less healthy food at the checkout, and were critical of supermarkets with no such restrictions, or which claimed to have restrictions that were not borne out by their experiences; (4) many parents/carers would welcome product-free checkouts; and (5) the whole supermarket was perceived as manipulative and stimulating for children, with particular criticism directed at the strategic placement of products designed to provoke impulse buys and purchase requests.

There were few differences between parents/carers of different social grades, between those caring for their children as single parents/carers and those with a partner, and by location. Although this was somewhat surprising, it was supported by previous analysis we conducted which found that there were no differences in purchases of less healthy checkout foods by social grade (Ejlerskov et al., 2018c). It is possible that the low cost of less healthy food items in comparison to more healthy food (Jones et al., 2014), both at the checkout and around the store, makes social grade irrelevant in purchasing decisions of less healthy items. Regardless of social grade or other demographic factors, all of our parents/carers spoke of their own susceptibility to temptation when confronted with less healthy and snack items, and of their depleted energy reserves for resisting their children's requests for less healthy food. Lack of self-control and discipline among adult shoppers

has been found elsewhere to underpin less healthy purchasing decisions, with adult shoppers using avoidance strategies to evade less healthy food in supermarket aisles (O'Brien et al., 2014). That less healthy foods placed at the checkout simply cannot be avoided when shopping, unlike tempting foods elsewhere in the supermarket, helps to explain why many of our parents/carers were supportive of the complete removal of these items from checkouts.

Parental lack of resistance concerning children's checkout food purchasing requests may in part be explained by parental approaches to snacking more generally. It has been suggested that some parents take a permissive approach to their children's snacking, characterised by few imposed rules or limits around snacking, expectations that certain occasions will lead to the consumption of snacks, and letting snack consumption be influenced by the external environment (Davison et al., 2015). The expectation was present among some of our parents that the shopping trip would end with a 'treat' for the child. Treating children has been found to be one aspect of parental responsibility in addition to making health food choices for family members (O'Brien et al., 2014). This may account for why parents succumb to their children's food requests 45–66% of the time (Carson & Reiboldt, 2010). Furthermore, similar to our finding that parents used checkout food as a 'bribe' to manage children's behaviour around the store, other studies have suggested that unhealthy snacks are used by parents in different settings as a tool to help control and manage children's behaviour (Baughcum et al., 1998; Fisher et al., 2015).

This study also extends and complements our two previous studies on UK supermarket checkouts policies (Ejlertskov et al., 2018a, 2018b). Our first study assessed UK supermarkets' policies in terms of scope, clarity and consistency and whether there was a relationship between policy and the nature of foods displayed at checkouts, finding clear differences between supermarkets (Ejlertskov et al., 2018a). This current study suggests that parents/carers (a) have noticed that some supermarkets have modified their checkouts in recent years, and (b) perceive differences between supermarket checkouts, with these differences being broadly consonant with the supermarkets' policies. The three supermarkets which were assessed in our first study as having clear and consistent policies, with associated reductions in availability and purchases of less healthy checkout goods (Ejlertskov et al., 2018a, 2018b), were spontaneously identified by parents/carers in this study as having 'less tempting' and 'better' checkouts compared with other supermarkets discussed in the focus groups. In addition, consistent with findings from our two previous studies that 'vague and inconsistent' policies were no more effective than no policies (Ejlertskov et al., 2018a, 2018b), parents/carers in this study did not generally perceive differences between those supermarkets that had no policy and those that had a vague or inconsistent one, criticising both types of store for 'bombarding' them with confectionery and other less healthy snacks at the checkout. This may suggest a 'threshold' effect whereby supermarkets need to make substantial changes before consumers notice them as different. It also suggests that government regulation which would stipulate a minimum standard for checkouts policies would have a greater impact than voluntary actions.

Our second study, which used time series analysis of food purchases, suggested that checkout food policies were associated with a reduction in purchases of foods typically displayed at checkouts (i.e. small portions of snack and confectionery items), but it was not possible to detect where in the store products had been bought from (Ejlertskov et al., 2018b). While this current qualitative study cannot answer this question, it does provide some insights. Parents/carers in our focus groups readily acknowledged that they were susceptible when shopping both to making impulse purchases themselves and to succumbing to purchase requests made by children, with a potent combination of factors serving to lower resistance at the checkout. Our findings are supported by other research which suggests that removing temptation at the checkout through healthier checkout policies likely reduces the opportunity to make such purchases, and that supermarket checkout food

policies may impact on total diet, rather than just some types of purchasing (Ejlertskov et al., 2018b).

While there is scope for more supermarkets to implement checkout policies, our study indicates other opportunities for supermarket interventions, which may result in public health benefits. Checkout restrictions were perceived as contributing in only a small way to reducing the total exposure to unwanted marketing stimuli and 'pestering' from children experienced on supermarket visits. Parents/carers spoke of being bombarded by manipulative marketing, including strategic placement at store entrances, ends of aisles and at children's eye level; packaging designed to appeal to children through use of cartoon characters, tie-ins, collectables and other design features; and price offers on less healthy foods. These promotions, combined with the stress of managing children's behaviour, resulted in purchases that parents/carers knew to be less healthy as well as incurring additional expense. Our study suggests parents would support restrictions on these marketing strategies, just as they support the promotion of healthier food (Khanom et al., 2015). Further research should explore whether, and how, food marketing controls could work in practice, whether parents would welcome these in other contexts (e.g. other types of retailers, sporting or entertainment venues), and whether restrictions should be imposed by retailers themselves on a voluntary basis or by governments. The public health literature has shown that voluntary, self-regulatory approaches by industry have limited effectiveness, supporting the importance of stronger measures by government (Knai et al., 2018).

Since collection of the data described here, the UK is moving in the direction of regulation rather than voluntary agreements. The UK government has published plans to "ban the promotion of unhealthy food and drink" at checkouts, the end of supermarket aisles and store entrances in England (Department of Health and Social Care, 2018). Similarly the Scottish government is currently developing the Bill on Restricting Foods Promotions to restrict junk food placement which encourages "over-consumption and impulse buying." (Scottish Government, 2019) Whilst these policies were the subject of public consultations in spring 2019 and Winter 2018/19 respectively, no definitive plans for implementation have been published to date. Supermarkets operating across the UK have recently had to implement Scotland specific Minimum Unit Pricing policy for alcohol. Although this regulatory move was challenged by the alcohol industry, licensed premises, including the supermarkets explored in our study, implemented the policy well and with high compliance (Dickie et al., 2019). This suggests that a requirement to implement different policies relating to food promotion and checkouts in stores in England and Scotland compared with Wales and Northern Ireland would be manageable for supermarket chains that have extensive management systems in place.

Our study has some potential limitations. As the focus groups were conducted across urban central Scotland, our sample may not be representative of, and the findings may not generalisable to, wider populations of parents/carers of primary school aged children across the UK or elsewhere, although commonalities in supermarket environments have been found across countries, for example in their availability of snack foods (Thornton et al., 2013). While we recruited parents/carers who visited a range of supermarkets, due to the geographical locations of the sample communities, our parents/carers may have had greater knowledge of some supermarkets over others, producing bias towards recollections of the supermarkets parents/carers knew best, rather than representing the whole UK grocery market. However, overall, parents/carers' perceptions of different supermarkets' checkouts were generally consistent with the checkouts policies we previously identified and analysed (Ejlertskov et al., 2018a). Further, while our parents/carers reported that items placed at checkouts and other areas around the store encouraged purchasing requests from children and impulse buys, this may not necessarily represent purchase or consumption of these items.

5. Conclusion

Voluntary supermarket policies which clearly and consistently restrict the placement of less healthy foods at checkouts have been welcomed by parents/carers of young children, although some would prefer stores to have no products at the checkout. Given that marketing strategies throughout the whole supermarket were viewed as problematic, public health policymakers and advocacy groups may want to encourage supermarkets to develop broader policies to support healthier food purchasing.

Funding

The work was undertaken by the authors as part of the Public Health Research Consortium (grant no. PHPEHF50/22). The Public Health Research Consortium is funded by the Department of Health and Social Care Policy Research Programme. The views expressed in the publication are those of the authors and not necessarily those of the DHSC. Information about the wider programme of the PHRC is available from <http://phrc.lshtm.ac.uk/>.

Contributors

The study was conceived and designed by JA, MW, AA and MS. AF, MS and DE developed the topic guide, conducted the focus groups and coded and analysed the data. All authors contributed to the interpretation of data. AF, MS and DE drafted the manuscript. All authors read and approved the final manuscript.

Data statement

Focus group participants were assured raw data would remain confidential. Participants did not consent to the sharing of data.

Declaration of competing interest

The authors declare that they have no competing interests.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.appet.2019.104541>.

References

- Baughcum, A. E., Burcklow, K. A., Deeks, C. M., et al. (1998). Maternal feeding practices and childhood obesity: A focus group study of low-income mothers. *Archives of Pediatrics and Adolescent Medicine*, 152, 1010–1014.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3, 77–101.
- Campbell, S., James, E. L., Stacey, F. G., et al. (2014). A mixed-method examination of food marketing directed towards children in Australian supermarkets. *Health Promotion International*, 29, 267–277.
- Carson, D. E., & Reiboldt, W. (2010). Parents' agreement to purchase healthy snack foods requested by their children. *Journal of Family and Consumer Sciences*, 102, 42–48.
- Children's Food Campaign (2012). *Checkouts Checked Out - How Supermarkets Promote Junk Food to Children and their Parents*. https://www.sustainweb.org/publications/checkouts_checked_out/, Accessed date: 28 October 2019.
- Cohen, D. A., & Babey, S. H. (2012). Candy at the cash register — a risk factor for obesity and chronic disease. *New England Journal of Medicine*, 367, 1381–1383.
- Cohen, D., Collins, R., Hunter, G., et al. (2015). Store impulse marketing strategies and body mass index. *American Journal of Public Health*, 105, 1446–1452.
- Cohen, D., & Farley, T. A. (2008). Eating as an automatic behavior. *Preventing Chronic Disease*, 5, A23.
- Davison, K. K., Blake, C. E., Blaine, R. E., et al. (2015). Parenting around child snacking: Development of a theoretically-guided, empirically informed conceptual model. *International Journal of Behavioral Nutrition and Physical Activity*, 12, 109.
- Delmar-Morgan, A. (2013). Sweets at supermarket tills are fuelling obesity crises. Independent 16th September 2013. <https://www.independent.co.uk/life-style/health-and-families/health-news/sweets-at-supermarket-tills-are-fuelling-obesity-crisis-8818094.html>, Accessed date: 28 October 2019.
- Department of Health (2011). *Nutrient profiling technical guidance*. <https://www.gov.uk/government/publications/the-nutrient-profiling-model>, Accessed date: 11 July 2017.
- Department of Health and Social Care Childhood obesity: A plan for action. Chapter 2. 2018 https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/718903/childhood-obesity-a-plan-for-action-chapter-2.pdf, Accessed date: 30 October 2019.
- Dickie, E., Mellor, R., Myers, F., et al. (2019). *Minimum unit pricing (MUP) evaluation: Compliance (licensing) study*. Edinburgh: NHS Health Scotland.
- Ejlerskov, K. T., Sharp, S. J., Stead, M., et al. (2018b). Supermarket policies on less-healthy food at checkouts: Natural experimental evaluation using interrupted time series analyses of purchases. *PLoS Medicine*, 15(12), e1002712.
- Dixon, H., Scully, M., & Parkinson, K. (2006). Pester power: Snackfoods displayed at supermarket checkouts in Melbourne, Australia. *Health Promotion Journal of Australia*, 17, 124–127.
- Ejlerskov, K., Sharp, S., Stead, M., et al. (2018c). Socio-economic and age variations in response to supermarket-led checkout food policies: A repeated measures analysis. *International Journal of Behavioral Nutrition and Physical Activity*, 15, 125. <https://doi.org/10.1186/s12966-018-0755-4>.
- Ejlerskov, K., Stead, M., Adamson, A., et al. (2018a). The nature of UK supermarkets' policies on checkout food and associations with healthfulness and type of food displayed: A cross-sectional study. *International Journal of Behavioral Nutrition and Physical Activity*, 15(52).
- Fisher, J. O., Wright, G., Herman, A. N., et al. (2015). Snacks are not food". Low-income, urban mothers' perceptions of feeding snacks to their preschool-aged children. *Appetite*, 84, 61–67.
- Hamilton, K. (2009). Consumer decision making in low-income families: The case of conflict avoidance. *Journal of Consumer Behaviour*, 8, 252–267.
- Hamilton, K., & Catterall, M. (2006). Consuming love in poor families: Children's influence on consumption decisions. *Journal of Marketing Management*, 22, 1031–1052.
- Harding, A., Wareham, N. J., Bingham, S., et al. (2008). Plasma vitamin C level, fruit and vegetable consumption, and the risk of new-onset type 2 diabetes mellitus. *Archives of Internal Medicine*, 168, 1493–1499.
- Harris, J. L., Brownell, K. D., & Bargh, J. A. (2009). The food marketing defense model: Integrating psychological research to protect youth and inform public policy. *Social Issues and Public Review*, 3, 211–271.
- Horsley, J. A., Absalom, K. A. R., Akiens, E. M., et al. (2014). The proportion of unhealthy foodstuffs children are exposed to at the checkout of convenience supermarkets. *Public Health Nutrition*, 17, 2453–2458.
- Jones, N. R. V., Conklin, A. I., Suhrcke, M., et al. (2014). The growing price gap between more and less healthy foods: Analysis of a novel longitudinal UK dataset. *PLoS One*, 9(10), e109343. <https://doi.org/10.1371/journal.pone.0109343>.
- Kaur, P., & Singh, R. (2006). Children in family purchase decision making. *Academy of Marketing Science Review*, 8, 1–30.
- Kelly, B., Chapman, K., Hardy, L. L., et al. (2009). Parental awareness and attitudes of food marketing to children: A community attitudes survey of parents in new south Wales, Australia. *Journal of Paediatrics and Child Health*, 45, 493–497.
- Khanom, A., Hill, R. A., Morgan, K., Rapport, F. L., Lyons, R. A., & Brophy, S. (2015). Parental recommendations for population level interventions to support infant and family dietary choices: A qualitative study from the growing up in Wales, environments for healthy living (EHL) study. *BMC Public Health*, 234. <https://doi.org/10.1186/s12889-015-1561-4>.
- Knai, C., Petticrew, M., Douglas, N., et al. (2018). The public health responsibility deal: Using a systems-level analysis to understand the lack of impact on alcohol, food, physical activity, and workplace health sub-systems. *International Journal of Environmental Research and Public Health*, 15, 2895.
- Knai, C., Petticrew, M., Durand, M. A., et al. (2015). Has a public-private partnership resulted in action on healthier diets in England? An analysis of the public health responsibility deal food. *Food Policy*, 54, 1–10.
- Kunkel, D., Wilcox, B., Cantor, J., et al. (2004). Report of the APA taskforce on advertising and children. *Section: Psychological issues in the increasing commercialization of childhood*. Washington: American Psychological Association.
- National Readership Survey Social grade. Available from: <http://www.nrs.co.uk/nrs-print/lifestyle-and-classification-data/social-grade/>, Accessed date: 10 March 2016.
- O'Brien, M. C., McConnon, A., Hollywood, L. E., et al. (2014). Let's talk about health: Shoppers' discourse regarding health while food shopping. *Public Health Nutrition*, 18, 1001–1010.
- Penney, T. L., Brown, H. E., Maguire, E. R., et al. (2015). Local food environment interventions to improve healthy food choice in adults: A systematic review and realist synthesis protocol. *BMJ Open*, 5, e007161. <https://doi.org/10.1136/bmjopen-2014-007161>.
- Schroder, M., & Lyon, P. (2013). Embedding healthy eating: Nudging or toolbox? *Nutrition & Food Science*, 43, 330–338.
- Scottish Government (2019). *Restrictions on food promotions*. <https://news.gov.scot/news/restrictions-on-food-promotions>, Accessed date: 30 October 2019.
- Sparks, L., & Burt, S. (2017). *Identifying and understanding the factors that can transform the retail environment to enable healthier purchasing by consumers: Report prepared for food standards Scotland (FSS 2016 013)*. https://www.foodstandards.gov.scot/downloads/FSS-Final_Report_June_1st_2017.pdf, Accessed date: 23 October 2019.
- Swinburn, B., Caterson, L., Seidell, J., et al. (2007). Diet, nutrition and the prevention of excess weight gain and obesity. *Public Health Nutrition*, 7, 123–146.
- Thornton, L., Cameron, A., McNaughton, S., et al. (2012). The availability of snack food displays that may trigger impulse purchases in Melbourne supermarkets. *BMC Public Health*, 12, 194.
- Thornton, L. E., Cameron, A. J., McNaughton, S. A., Waterlander, W. E., Sodergren, M., Svastisalee, C., et al. (2013). Does the availability of snack foods in supermarkets vary internationally? *International Journal of Behavioral Nutrition and Physical Activity*, 10, 56.

- Vergnaud, A. C., Norat, T., Romaguera, D., et al. (2012). Fruit and vegetable consumption and prospective weight change in participants of the European prospective investigation into cancer and nutrition-physical activity, nutrition, alcohol, cessation of smoking, eating out of home, and obesity study. *American Journal of Clinical Nutrition*, 95, 184–193.
- Wang, X., Ouyang, Y., Liu, J., et al. (2014). Fruit and vegetable consumption and mortality from all causes, cardiovascular disease, and cancer: Systematic review and dose-response meta-analysis of prospective cohort studies. *BMJ*, 349, g4490.
- Winkler, L. L., Christensen, U., Glumer, C., et al. (2016). Substituting sugar confectionery with fruit and healthy snacks at checkout - a win-win strategy for consumers and food stores? A study on consumer attitudes and sales effects of a healthy supermarket intervention. *BMC Public Health*, 16, 1184.
- Wright, J., Kamp, E., White, M., et al. (2015). Food at checkouts in non-food stores: A cross-sectional study of a large indoor shopping mall. *Public Health Nutrition*, 18, 2786–2793.