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# **Understanding interactions with the food environment: an exploration of supermarket food shopping routines in deprived neighbourhoods**

**Claire Thompson, Steven Cummins, Tim Brown, Rosemary Kyle**

## **Abstract**

Despite a sustained academic interest in the environmental determinants of diet, relatively little is known about the ways in which individuals interact with their neighbourhood food environment and the use of its most important element, the supermarket. This qualitative study explores how residents of deprived neighbourhoods shop for food and how the supermarket environment influences their choices. Go-along interviews were conducted with 26 residents of Sandwell, a uniformly deprived metropolitan borough in the West Midlands, UK. Routine approaches to food shopping are characterised in terms of planning and reliance on the supermarket environment. Four distinct routines are identified: chaotic and reactive; working around the store; item-by-item; and restricted and budgeted. This suggests that residents of deprived neighbourhoods do not have uniform responses to food environments. Responses to supermarket environments appear to be mediated by levels of individual autonomy. A better understanding of how residents of deprived neighbourhoods interact with their food environment may help optimise environmental interventions aimed at improving physical access to food in these places.

## **Key words**

Food shopping; Supermarkets; Food Environment; Deprivation; Go-along interviews

## **Introduction**

Research which investigates the role of the neighbourhood environment in determining diet quality has become increasingly important in recent years (McKinnon et al., 2009). A large body of primarily epidemiological research has emerged which investigates how the structure and organisation of the neighbourhood food environment (operationalized as the availability of grocery stores and fast-food restaurants) might influence food purchasing patterns and hence diet and diet-related chronic diseases (Cheadle et al., 1991; Diez-Roux et al., 1999; Franco et al., 2008; Morland et al., 2006; Morland et al., 2002). Much of this work has been undertaken in the USA and has demonstrated that neighbourhood availability of components of a healthy diet may be an important mediating factor between neighbourhood deprivation and diet quality (Morland et al., 2002; Zenk et al., 2005; Zenk et al., 2006).

In the UK, it has been found that food consumption varies between neighbourhoods and that living in a disadvantaged neighbourhood may be independently associated with poor diet (Anderson and Hunt, 1992; Forsyth et al., 1994; Shohaimi et al., 2004). However, much of this work takes a 'black-box' approach and does not tend to explore whether there are variations in how residents of deprived neighbourhoods respond to the neighbourhood food environment, and what shape these varying responses may take. Much research in this area relies on a simple conceptual model suggesting that better access to a wider range of food stores in deprived areas is associated with improved diet. However, environmental influences on diet can also be understood as relational and dynamic (Cummins et al., 2007; Curtis, 2004; Jackson et al., 2006; Pred, 1984). Within this context, the act of shopping for food is a key link in the causal pathway as it is the primary means through which many individuals interact with their neighbourhood food environment.

Supermarkets are the dominant format of food and grocery retailing in the UK (Degeertu et al., 2000; Miller, 1997; Wrigley et al., 2009). The four largest UK supermarket chains are Tesco, Asda, Sainsbury's and Morrison's which between them account for 75.4% of all food shopping (Henderson Research, 2011). Smaller, local grocery stores are increasingly being overtaken by these large chain supermarket retailers (Everts and Jackson, 2009; Grewal et al., 1998). Regular 'big shops' at supermarkets interspersed by 'top-up' trips at local stores to meet daily needs is a well-documented approach to household food shopping (Grewal et al., 1998; Henderson Research, 2011) and thus the supermarket is central to the modern food shopping experience (Bowby, 1997). Supermarkets appeal to a broad range of people as they market themselves as offering choice and value. Supermarkets are made appealing to customers through price promotions, environmental manipulation (such as lighting, aromas and muzak) and customer comforts (Bell and Valentine, 1997). In-store decision making about food purchasing is thus a complex activity affected by a variety of environmental cues and it has been suggested that theorising food shopping as a linear and rational process (as is done in much existing public health research) may thus be unhelpful in understanding food shopping behaviour (Gram, 2010).

Work in consumption offers insights into supermarket food shopping behaviour not usually employed in diet and nutrition research. Mass produced consumer objects, like shop-bought food, are encountered and used by individuals who incorporate them into their personal repertoires of consumption (Woodward, 2007). At present, there is little observational and ethnographic research on these shopping behaviours (Jackson and Holbrook, 1995; Miller, 2001) and even less that focuses directly on food shopping (Gram, 2010). Ethnographic

investigation of how individuals use their neighbourhood food environment, especially in large, highly designed marketing spaces like supermarkets, is particularly rare.

The ways in which people behave in-store and make decisions about what foods to purchase can be described with reference to routinized behaviours, and to differing levels of individual agency. Agency, here, is taken to mean the reflexive monitoring of personal conduct and behaviour of individuals whilst shopping (Jackson and Holbrook, 1995). Routines can be understood as strategies of decision making that simplify daily activities and tasks (Jastran et al., 2009). Ilmonen (2001) argues that these types of repetitive consumption can be understood as largely unreflective behaviours. From this standpoint, supermarket food shopping has the potential to be either a planned and critical enactment of agency or an unreflective and reactive set of habitual behaviours.

In this paper, we investigate food shopping using qualitative observational and interview data from 26 adult participants in Sandwell, West Midlands. Sandwell is a metropolitan borough covering a geographical area of 85.58 km<sup>2</sup>, with a population of approximately 292,800. Sandwell is the 12<sup>th</sup> most deprived local authority in England (Sandwell PCT, 2010). More than 30% of adults in Sandwell are on benefits of some kind and rates of adult economic activity are lower than the national average (Black Country Consortium, 2011). Sandwell faces a variety of health challenges commonly associated with deprived areas. Smoking and teenage pregnancy rates are significantly higher than the national average in the adult population. Life expectancies for both males and females are significantly lower than the national figures. Fruit and vegetable daily consumption is significantly lower than the national average and both child and adult obesity rates are significantly higher, with 25.9% of year 6 children obese (NHS, 2011; Sandwell PCT, 2008a). The paper explores the

supermarket food shopping behaviours of a sample of residents of deprived neighbourhoods and explores how they decide what to buy. The aims of this paper are: to investigate how the supermarket environment influences food shopping behaviours; to describe how individuals vary in their response to the supermarket environment; and to consider the implications of this work for research on the environmental determinants of diet

## **Methods**

Over a six-month period in 2010, a symbolic interactionist ethnography was carried out in Sandwell, West Midlands. Symbolic interactionism is a theoretical perspective which assumes that people construct selves, society and reality through interaction (Rock, 2001). This approach focuses on dynamic relationships between meaning and action, and addresses the active processes through which people create and mediate meanings (Charmaz, 2006). Symbolic interactionist ethnography assumes that human group life is intersubjective, activity-based, negotiable and relational (Tan et al., 2008). This approach explores the interpretations that people attach to themselves, other people and other objects (for example, food products and the food environment). Ethical approval for the study was obtained from the Queen Mary Research Ethics Committee (QMREC).

### ***Recruitment and sample selection***

All participants were recruited and interviewed by CT. Participants were recruited from community settings including libraries, schools and community centres. Initially, community workers and gatekeepers were approached, via introductions from Sandwell PCT (Primary

Care Trust) staff, and asked to assist with recruitment. Where possible, initial participant briefing meetings were arranged in these community settings and participants, given the option, tended to choose these spaces over their home. Participants, once recruited, were briefed about the study, its aims, and their expected involvement. They were also issued with an information pack giving details about the research and relevant contacts. Informed consent was gained from participants at this briefing via a form included in the information pack. Participants were informed that they had the right to withdraw from the study at any time and permission to record interviews was also sought.

### *Sample description*

Twenty-six participants from deprived neighbourhoods were recruited for the study. The sample was comprised of ten men and sixteen women aged 18-70. Table 1 describes the social characteristics of the participants. The sample was mostly white (n=20) and over 30, with some Asian and African Caribbean participants (n=6). Six participants lived alone, and all others either lived with their partners and/or families. One third of participants were not in paid employment (n=9). Participants were sampled for diversity on the basis of age, ethnicity and family background, though were all resident in deprived neighbourhoods. Recruitment continued throughout data collection until data saturation was reached and no new information was generated. Two of the participants declined to take part in a go-along interview, although they did participate in other stages of data collection. Both of these participants felt that an unaccompanied outing with a female researcher (CT) would be inappropriate for cultural reasons. In addition, one go-along was a joint interview as the participants were a co-habiting couple. As a result, the data presented here are from 23 go-along interviews, despite the recruitment of 26 fieldwork participants.

### *Data collection*

The present study used the explicitly context-focused method of the go-along interview. Go-alongs are a combination of observation and interview (Carpiano, 2009; Kusenbach, 2003) and are used here to explore how individuals interact with the neighbourhood food environment through food shopping. Go-along interviews, in the form of accompanied food-shopping trips, were conducted by the first author and were carried out in the participants' local neighbourhood.

Participants were asked to identify a convenient time and place to be accompanied on a food shopping trip. In the majority of cases participants chose to be interviewed when visiting a supermarket and thus the data presented here is taken from these interviews. Very limited amounts of data were collected in smaller local shops. The supermarkets visited were Asda, Tesco, Sainsbury's, Lidl and Iceland.

An interview schedule was developed and piloted, and was used in a flexible manner as go-alongs are a negotiated and participant-led method. For example, participants often changed their minds about where the go-along would take place, sometimes mid-interview. The opening question for the interviews 'Explain to me where we are going and why we are going there' prompted a wide range of discussions and comments about the local food environment and why certain stores were preferable to others. Participants were asked to narrate their food choices as they did their shopping and to explain how they made decisions around food buying, and who they were buying food items for. Prompts were designed to interrogate



repetitive and routine decisions. When participants stopped to look at promotions or special offers they were asked what they thought of them, and asked how and why they might influence their purchasing behaviour. Observational data on the way participants behaved in-store and their trajectory around the supermarket were recorded in field notes. Interviews lasted from fifteen minutes to nearly three hours and, occasionally, included visits to multiple stores. In addition to audio-recording, CT recorded the journeys taken, the places visited and the purchases made using photographs. This is important as the utility of go-along data hinges on the inclusion of adequate levels of location information to situate and ground the interviews (Carpiano, 2009).

### *Data analysis*

Interviews were transcribed verbatim and the transcripts produced included references to both field notes made, and photographs taken, during the interviews. In this way participants' verbal accounts and non-verbal behaviours could be analysed and coded in one data set in order to give a fuller picture of food shopping practices. NVivo9 software was used to facilitate and organise the analysis. Transcripts were analysed thematically, using open coding to identify initial categories. The transcripts were then re-examined for contradictions and dilemmas in order to refine the categories and construct a coding frame that adequately captured the emerging themes.

### *Coding*

A thematic analysis seeks to identify patterns of experience, talk and behaviour. To a large extent, it is based on the same relativist and interpretive concerns as a purely grounded theory

approach, most significantly those of constant comparison and theoretical sampling (Aronson, 1994). These principles necessitate that data collection and analysis are interdependent and that theory and conceptual categories are emergent (Kitchin and Tate, 2000; Suddaby, 2006). Data related to ‘shopping strategies’, one of two broad themes identified during the course of the wider project, were extracted and analysed here. Within this theme, several sub-themes emerged (see table 2). The ‘shopping strategies’ theme is an overall description of participants’ approach to food shopping. Varying approaches to food shopping employed by participants are represented in the sub themes. For example, some participants shopped in a relatively ‘chaotic’ manner characterised by erratic movements around the store and impulse buys. Others tended to work from a list ‘searching item by item’. In the course of analysis the ‘shopping strategies’ sub themes were further refined to form the four main styles of food shopping. These are described in the following sections.

## **Findings**

Participants demonstrated and described four distinct styles of food shopping that they routinely deployed in the supermarket: (1) Chaotic and reactive, (2) Working around the store, (3) Item by Item, and (4) Restricted and budgeted, which are described below. The term routines-of-practice is used here to represent these routinized approaches to food shopping. ‘Chaotic and reactive’ is the lowest agency routine-of-practice, which is the most influenced by the supermarket environment and is characterised by erratic behaviours and unplanned purchases. ‘Restricted and budgeted’ is the highest agency and relies least on the supermarket environment and more on planned purchases. Participant information has been anonymised and participants are referred to by their pseudonyms.

## *Routinized approaches to Food shopping*

### *1. 'Chaotic and reactive'*

Some participants displayed 'chaotic and reactive' routines-of-practice, in which very little planning was involved and they relied heavily, and often exclusively, on the supermarket environment and the various marketing cues to consume. Participants often wandered around the supermarket, doubling back on themselves when something caught their attention, and visiting the same aisle several times. As a result, interviews that were predominantly 'chaotic and reactive' were often the longest. Also, these interviews typically included unplanned non-food purchases such as clothing and stationery. The disjointed and haphazard nature of these interviews is demonstrated in the quote below from an interview in Asda:

Interviewer: What's caught your eye?

Lauren: Digestives (picking up a packet of mini digestives).

**She looks at them, puts them back and starts looking at the other packs of biscuits.**

Lauren: I'm not a big biscuit eater ... I love them (**pointing at a Box of Tux cheese biscuits**). I am a fan of cheese ... it's only like ... if I eat block cheese I can only eat really mature cheddar.

**Lauren starts looking at the chocolate biscuits**

Lauren: I have to be really in the mood for those

**Lauren turns around and starts looking at the multipacks or crisps again, carefully scanning the shelves and eventually settling on Nik Naks, which she puts in the basket. She walks off again and stops to look at the cream cakes**

Lauren: I like them cakes but I don't like trifles ... Oh I've got to get my mum a card.

During the interview Lauren wandered around the store looking at a wide variety of foods and with little clear idea of what food items she wanted to purchase. She switched her attention from one product to another, moving up and down the aisles and finally walking off to a different aisle. This 'wandering' around the store was characteristic of 'chaotic and reactive' routines. Lauren was entirely absorbed in the activity of examining food and in responding to the supermarket environment. A further example of chaotic and distracted behaviour can be seen in this extract, from an interview with a young man, Adam, also in Asda. He experienced a great deal of indecision over what to purchase:

Adam: .... I don't know whether to ... er ... put the ice cream back and get the cheesecake.

... .. (staring at the ice cream) ... Yeah ... I don't normally

buy this though ... so no. I'm not really thinking about money now  
**(continues examining ice cream)**. I'm probably gonna get that ...  
Oh, I don't know what to do! **(goes back to comparing the ice cream)**  
... that's it **(puts ice cream back in the freezer)** ... Oh, I'm sorry now  
... I'm gonna go and get some bread **(walks towards bakery section,  
past the cakes and pauses to look)** ... see ... now I've seen something  
else I like ...

A good deal of time was spent by the frozen desserts while he tried to make up his mind between several different types of ice cream and a cheesecake. His speech was disjointed, as he was concentrating on his dilemma, and he kept walking back and forth along the aisle, looking at various desserts. Adam only had a £10 budget to spend that day, yet he was in the supermarket for around 45 minutes, as he found decision-making difficult.

## 2. *'Working around the store'*

'Working around the store' is also a routine-of-practice driven by the supermarket environment, and one that relied quite heavily on familiarity and repetitive food purchases. Individuals were prompted, rather than guided, by the in-store environment, resulting in a somewhat greater exercise of agency. Participants worked their way around the store methodically, aisle by aisle, looking around them for familiar, regularly consumed products, which they used as a prompt to select and purchase. The extract that follows is from another interview in Asda.

**She looks back towards the shelves and walks on, mumbling as she**

**looks at the canned foods.**

Pat: Beans I've got. Beans and sausages, that's what we had the other day (referring to earlier interview). Remember? Erm ... they must be down here. I don't have red sauce ... I only use that about once a month. But I'll tell you what I do have a lot of ... beetroot. I love beetroot.

As Pat saw the canned goods on the shelf it served as a prompt. She questioned whether or not she had baked beans at home, commented that she did and then continued to progress down the aisle, pausing next at the jars of pickled beetroot. Pat did most of her food shopping at Asda and was very familiar with the store layout, which she used as a prompt to inform and guide purchasing decisions. This type of engagement and interaction with the in-store food shopping environment was almost tacit, and the participants found it quite easy to chat about other subjects as they worked their way around, selecting purchases. This is in contrast to the much more absorbing, 'chaotic and reactive' approach, in which researcher interactions with participants were often limited by how engrossed participants became in making purchasing decisions.

On another occasion, a married couple and their teenage son were accompanied on a trip to Tesco. On entering the store the family group members assumed quite specific roles. The wife (Jayanti) walked in front, working her way up and down the aisles, methodically looking around at various products and placing them in the trolley. The husband followed, pushing the trolley. Meanwhile, the son wandered off alone. He kept returning to this mother with

potential purchases, including crisps, spray cream, ice cream and chocolates, and asking for her approval. Their interactions can be seen in the quote below:

Jayanti: .... (to son, who is approaching with some Spicy Pringles)

I've got some, these ones (pointing). Go and get a bottle of squash to take back.

Son: I want these (crisps)

Jayanti: They're horrible they are (pointing to son's choice of crisps)

Son: No, they're hot

.....

**Son comes back with a large tub of ice cream**

Jayanti: (to son) Why don't you get some Häagen-Dazs instead?

The family were interacting with the supermarket environment and performing context-specific behaviours. They regularly used this store and, upon entering it, they relied on the familiar layout and reacted to the products displayed, engaging in constant negotiations and compromises over whether or not to buy these products. Decisions about what foods to purchase, and therefore consume, cannot be separated from the context in which they are made.

### 3. *'Item by item'*

The item by item approach is a relatively high agency routine-of-practice for which participants relied on planning and predictable food choice practices. Individuals entered the supermarket with either a written list or a very clear idea of which items they intended to purchase. Engagement with price promotions and impulse-buys still occurred, but the participants maintained a purposeful trajectory around the store. However, some limited engagement with marketing features of the supermarket environment was anticipated by participants in that they expected to go home with a small number of purchases that they had not planned, as demonstrated in the extract below:

Poppy: Where's my shopping list? (**participant searches pockets**).

Interviewer: Do you always bring a list?

Poppy: Gosh yes, I have to (**laughs**). Yes I have to or I wouldn't remember, especially when I have to deal with her (daughter).

Interviewer: Do you stick to the list?

Poppy: Yeah ... generally, unless I see anything on offer. Yeah ... I look for the bargains and stuff, save money.



Participants adopting this routine-of-practice tended to carefully plan for food shopping trips, more especially for Poppy as she limited supermarket shops to once a month for bulk-buying. After shopping at Asda we went to Lidl, specifically to bulk-buy fruit juice and soft drinks. Poppy prepared a separate list for each store. In each store she moved purposefully around the space searching for each item on her list. She did stop at price promotion displays as we passed them and considered purchases that were not on the list, but this remained secondary to completing her pre planned purchases. Poppy did not look around the whole store. She searched for the items on her list and then made her way directly to the check out. Interactions with this supermarket space were limited and structured.

Individuals taking this approach were also selective in which features of the supermarket they chose to interact with. They actively navigated the space searching for their pre-planned purchases, rather than passively reacting to the environment. The sense of purpose this strategy entailed was evident in both participants' shopping behaviours and in their descriptions of them. For example, Brian explained his approach to food shopping during a go-along in Sainsbury's.

Interviewer: Do you normally take a list with you when you go shopping?

Brian: No, I don't. I just ... er ... for instance if we need something for er ... if I know what we need I'll go in, I'll be we need this, this, this, this and I just get them and go. I don't, you know ... and occasionally, depending what time I've got, I will buy er ... have a bit

of a snoop round, have a look for something for a bit of a pudding.

Brian was in the store less than 15 minutes and spent £4.30. Although he made one unplanned purchase, he had a clear purpose to the shopping trip and navigated the supermarket environment to search out his desired products on an item by item basis. This routine-of-practice can be conceived as higher agency because these individuals had a clear idea of what they wanted to purchase and were not greatly influenced by in-store marketing.

#### ***4. 'Restricted and budgeted'***

This high-agency routine-of-practice is a very controlled, considered and critical approach to food shopping. Participants had clear objectives and made planned purchases. They actively navigated the supermarket space and limited their choices decisively either in terms of money, health considerations or both. These participants were highly motivated not to waste money and/or not to purchase unhealthy foods. As with the 'chaotic and reactive' routines this approach resulted in lengthy go-along interviews, yet they were very different in nature. The participants worked their way around the store in a methodical way. They also spent a great deal of time examining the labels of products to check the ingredients, price or value. Lawrence, for example, deployed a deliberate and considered approach to deciding what to purchase. During an interview in Asda he spent several minutes comparing the fat content, range of flavours and ingredients before deciding to purchase a pack of yoghurts. As can be seen in the extract below, Lawrence took time over the purchase and selected the product he believed to be the healthiest.

### **He picks up a pack of Activia yoghurts**

Lawrence: They're fat free, they're good. They taste as good as erm ... the other ones. They last quite well. I'll probably get ... yeah ... that's not fat free (**looking at another pack of yoghurts**). That one is ... and then the flavours, you don't get the same flavours. I'll stick with the fat free.

Participants that adopted 'restricted and budgeted' routines-of-practice were very clear about what they wanted before entering the supermarket. Equally, they were extremely clear about what they did *not* want, thereby constraining their range of food choices and giving the food shopping trips a sense of purpose.

A critical and purposeful use of the supermarket environment was also observed in participants who restricted their purchases for financial reasons. A young couple (Hollie and Simon) expressed a strong desire to eat healthily despite operating within a limited budget. In order to maximise their purchases and eat the healthiest and most enjoyable diet they could, they employed a number of pre-planned practices; the most notable of which was their use of a calculator when food shopping. Once they had agreed a set budget for the shop Simon would enter the total amount and each time he selected an item he would subtract the cost from the total, ensuring that they did not go over-budget. They employed this strategy on a go-along in Asda:

Simon: We've got to get mushrooms as well ... so probably a bolognaise.

Interviewer: Who cooks that?

Simon: I do most of the cooking ... What did we have last week?

Hollie: Er ...

Simon: Chicken strips and fajitas ... that was it.

Interviewer: What are you looking for?

Simon: Just some salad and tomatoes... there they are

**Simon selects a bag of salad and subtracts the amount from the total on his phone.**

Employing such a detailed and careful shopping strategy meant that every purchase had to be considered for financial and diet-related reasons. Saving money on food shopping was a significant way for the couple to increase their disposable income. On weeks that they thought they had performed a particularly cost-effective shop they kept the receipt and tried to replicate it on subsequent shopping trips, as explained below:

Simon: Like if we've done really well and got lots we'll put it (receipt)

to one side just to try and get it again or use it as a shopping list,  
but not always.

Reducing potential purchases by implementing health-related and/or economic restrictions can be viewed as a high agency approach. Interactions with the supermarket environment are selective and structured because participants adhere to self-imposed values and constraints when they are shopping for food.

## **Discussion**

This paper examines shopping for food as a consumption-related behaviour in a sample of residents of deprived neighbourhoods using the notion of routines-of-practice to characterise in-store food shopping. These routines can be viewed on a continuum from low to high agency behaviours (see Figure 1). Low agency behaviours relied heavily on environmental cues within the supermarket and involve little planning. High agency behaviours, in contrast, were highly planned, incorporated little impulse purchasing, and were often guided by economic or health-related criteria. We demonstrate here that, within the supermarket, in-store marketing exerts a strong environmental influence with the cues to purchase food so numerous and pervasive that low agency individuals can adopt chaotic and reactive shopping behaviours. The key factor that separates one routine-of-practice from another is agency. Those who pre-identified needs and planned purchases before entering the supermarket space were much less likely to be influenced by special offers, promotions and other environmental cues to purchase foods. The data clearly show that individual responses to the supermarket environment were far from uniform and were mediated by differing levels of agency, planning and responsiveness to in-store promotions.

Although other pressures, such as individual time and budget constraints, may have an impact on food-related behaviours, the participants in this study did not refer to these factors once in the supermarket environment. Some unemployed participants reported regularly spending considerably more on food shopping compared to participants in full time employment. Similarly, participants who reported being very busy, devoted a great deal of time to food shopping and conversely others with more time, including some participants who were retired, shopped very quickly and efficiently. This indicates that once in-store, the supermarket environment may be designed in such a way as act to negate constraints related to time and cost. Larger retailers rely on manipulating aspects of the in-store environment, such as lighting, aroma, music and layout to increase pleasure levels and, in turn, influence shopper behaviours, including time and money spent (Dewsbury, 2011)

The categorisation and description of shopping behaviour is not new (Woodruffe-Burton et al., 2006). Market researchers have long been interested in the ‘types’ of shopping behaviour that consumers exhibit. Cobb and Hoyer (1986) identified three types of grocery shopper: planners; partial planners; and impulse purchasers. They examined the influence of brands, shopping lifestyles, time taken for in-store search, frequency of purchase, importance of choice, individual personality and demographics (Cobb and Hoyer, 1986). Additionally, the practice of shopping as a recreational and leisure activity is well documented (Cox et al., 2005; Jackson and Holbrook, 1995; Leach, 1984; Miller, 1998). A recent ethnographic study attempted to observe naturally occurring interactions between parents and their small children in supermarkets. The findings suggest that both parents and children manage a number of roles and apply a range of negotiation strategies when food shopping (Gram, 2010).

Despite this work, little account has been taken of the influence of environment, and specifically that of the supermarket as a consumption environment, on food shopping within public health nutrition research. Ethnographic investigations of how individuals approach food shopping in heavily marketed spaces are rare. Supermarkets provide a wide range of choices and variations that encourage the consumer to look around and browse (Bowly, 1997). Part of the culture and spectacle of large shopping spaces is the colour, display and the encouragement of sensory pleasure from these features (Leach, 1984). Many of the participants of this study spent a considerable amount of time examining products that they did not necessarily intend buying, but did so because they enjoyed the activity of shopping; of engaging with the wide range of choice and variety provided in the supermarket environment.

Marketing research shows that consumers are often unaware of the exact processes that occur when they make purchasing decisions in supermarkets because they tend to rely on well-established and tacit routines of behaviour (Gram, 2010). For consumers, routinized behaviour is a way of avoiding a long series of mundane decision-making in a specific context (Ilmonen, 2001). The idea of 'routine' behaviours has yet to be examined in public health research. Jastran and colleagues observe that nutrition professionals are very much aware of the influence of recurring food practices on dietary health, yet these remain under researched (Jastran et al., 2009). The present study addresses this gap in the literature by examining the routine behaviour of food shopping in a manner that is sensitive to context.

Supermarkets are highly designed environments that facilitate behaviour, often at an unconscious level. They shape and dictate food-purchasing decisions using a variety of environmental cues and stimuli. Marketeers increasingly favour in-store marketing and promotion, such as price reductions and special offers, over traditional out-of-store

advertising (Egol and Vollmer, 2008), making the supermarket environment ever more important in driving food shopping behaviour. The impact that these factors have on food purchasing and subsequent consumption warrants further research.

The findings of this study demonstrate that residents of deprived neighbourhoods do not have a uniform response to, and interaction with, their local food environments. Some individuals appear to be relatively 'resilient' to environmental cues and prompts, while others are more susceptible to particular features of the supermarket environment and therefore more likely to engage in passive and impulsive food shopping behaviours. The 'resilient' participants appeared to shop for food more effectively on a restricted budget.

Much research on the environmental determinants of diet-related behaviour relies on a simple conceptual model that assumes that deprived neighbourhoods have poor quality food environments and that improving access to supermarkets and grocery stores within them will improve the diet of residents (Cummins, 2007; Cummins et al., 2005c; MacIntyre et al., 2008). Current policy initiatives tend to focus on structural interventions that increase physical access to food in low-income communities. For example, the 2007 Foresight Report *Tackling Obesities* (IDeA, 2011) and Michelle Obama's recent 'Let's Move' campaign (Task Force on Childhood Obesity, 2010), seek to tackle 'food deserts' and 'underserved' neighbourhood food environments in order to combat obesity. The findings reported here suggest that a 'one-size fits all' structural policy response may not always be effective, as not all individuals in low-income communities have uniform responses to the same food environment. Classifying neighbourhoods as 'deprived' does not necessarily capture the complex interaction of factors associated with living in poverty and their behavioural outcomes in relation to health (Anderson, 2007) and this is an important factor to consider



when targeting structural interventions. Relatively little is known about the mechanisms that underlie income and SES differences in dietary behaviours (Inglis et al., 2005). In the present study, behaviours within supermarkets were very diverse and this suggests that varied individual responses to the supermarket environment *within* low-income neighbourhoods are mediated by differing levels of individual agency. Such findings highlight the need to expand environmental policies and interventions to include an emphasis on factors that increase agency in order to modify food shopping behaviour.

### *Study limitations*

There are a number of limitations to the work undertaken here. Firstly, although outside the funding and time constraints of the study, a second wave of data collection might have been beneficial. By conducting several go-along interviews we could have examined the consistency of practices that participants deployed. Some participants described very changeable diets and thus, in this cross-sectional study, we are unable to get a sense of how consistent the behaviours described here are. Secondly, qualitative data collection can also be subject to particular kinds of researcher bias and, in particular, effected by the degree of comfort experienced by participants of different social backgrounds to that of the researcher (Coveney, 2005). The social characteristics of the interviewer may have affected the composition of the sample and subsequent interactions with participants. Despite sampling for diversity, 11 of the participants were female, white and aged over 30, similar to the interviewer. Recruiting men proved particularly problematic, which was compounded by the fact that the majority of community gatekeepers and PCT staff were female. The gender of key actors in the research process, can influence the nature of the data collected and,

consequently, the information that becomes coded as knowledge (Rose, 1997). In this study there seemed to be a level of tacit knowledge in interviews with female participants, about shared experiences of shopping and cooking for a family.

## **Conclusion**

Despite the numerous studies on the environmental determinants of diet there remains a lack of clear conceptualisation of *how* environmental factors may influence dietary behaviour (Giskes et al., 2007). Incorporating insights from consumption and marketing research may be useful in helping researchers unpack the ‘black-box’ of how the neighbourhood food environment may affect diet by generating a more nuanced understanding of individual responses to diet-related environmental factors through the act of food shopping.

Supermarkets are an important part of the neighbourhood food environment and understanding the practice of food shopping is key to understanding interactions with it. This paper has examined the ways in which the supermarket environment can influence food shopping behaviours, and has demonstrated that residents of deprived neighbourhoods do not routinely respond in a uniform manner to similar environments. Four main patterns of shopping behaviour were identified: chaotic and reactive; working around the store; item-by-item; and restricted and budgeted. These food shopping routines are strongly mediated by levels of individual agency and the findings presented here suggest that in-store marketing can exert a particularly strong environmental influence over low-agency shoppers. These

shoppers adopt a chaotic and reactive approach to food shopping when in these settings. Although a higher-agency and more planned approach to food shopping does not necessarily mean that individuals will buy more nutritious food, it does mean that unplanned purchases and overconsumption are lessened for these shoppers. In fact, our findings suggest that the further exploration of experimental dietary interventions that improve individual agency, such as ShopWell, an intervention designed to improve individual food shopping behaviours (ShopWell Solutions Inc, 2010), might complement existing environmental interventions that seek to improve physical access to food stores in deprived areas.

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