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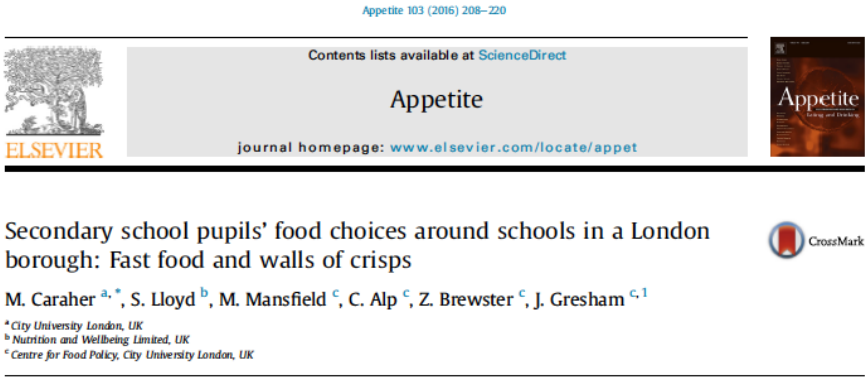
Title page

Secondary school pupils' food choices around schools in a London borough: walls of crisps and cheap food



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Secondary school pupils' food choices around schools in a London borough: Fast food and walls of crisps

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In Publication in Appetite

Shortened title: Understanding pupils' food choices around schools

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Keywords
Fast food, cold food takeaway, food clusters, stay-on-site policies, food choice, school foodshed.

Authorship

Lloyd, Mansfield, Alp, Brewster and Gresham all collected data and were involved in the field observations. Caraher and Lloyd were responsible for the analysis and initial presentation of data including an early draft of a paper which all authors then commented on. Caraher and Mansfield finalised the paper before submission.

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Conflict of interest

There are no conflicts of interest declared.

Abstract

The objective was to observe and document food behaviours of secondary school pupils from schools in a London borough. The research design combined a number of methods which included geographic information system (GIS) mapping of food outlets around three schools, systemised observations of food purchasing in those outlets before, during and after school, and focus groups conducted with pupils of those schools to gather their views in respect to those food choices.

Results are summarised under the five 'A's of Access, Availability, Affordability and Acceptability & Attitudes:

Access in that there were concentrations of food outlets around the schools. The majority of pupil food purchases were from newsagents, small local shops and supermarkets of chocolate, crisps (potato chips), fizzy drinks and energy drinks. Availability of fast food and unhealthy options were a feature of the streets surrounding the schools, with 200m the optimal distance pupils were prepared to walk from and back to school at lunchtime.

Affordability was ensured by the use of a consumer mentality and pupils sought out value for money offers; group purchasing of 'two for one' type offers encouraged this trend. Pupils reported healthy items on sale in school as expensive, and also that food was often sold in smaller portion sizes than that available from external food outlets.

Acceptability and Attitudes, in that school food was not seen as 'cool,' queuing for school food was not acceptable but queuing for food from takeaways was not viewed negatively; for younger pupils energy drinks were 'cool'.

In conclusion, pupils recognised that school food was healthier but provided several reasons for not eating in school related to the five 'A's above.

Introduction

~~In previous work we explored the location of fast food outlets around secondary schools and the influence of food availability on food choice[1]. This paper further explored both location and food availability, adding to current knowledge from the perspective of secondary school pupils. The competitive food environment around schools and its links to child health, particularly weight, is an on-going discussion [2, 3]. The competitive food environment refers to any food or drink that can be accessed, purchased and consumed on the way to/from school or in school[i]. This can include energy or sugar sweetened drinks, crisps (potato chips), chocolate and sweets (referred to as cold food takeaway) and it can also include hot takeaway food.[4, 5, 6]. Fast food has also been defined as burgers, chips/French fries, fried chicken and mass-produced pizza; we have used the extended description of both hot and cold food takeaway as a guide for this work [7, 8].~~

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Work from the English National Obesity Health Observatory in 2012 displayed the relationship between density of fast food outlets and deprivation by local authority, and found a strong association, with more deprived areas having more fast food outlets per 100,000 population (Public Health Observatories, 2012) [9]. A report in the BMJ Burgoine et al (2014)[10] showed that exposure to takeaway food outlets was positively associated with consumption of takeaway food; the domains of '*home, at work, and along commuting routes*' combined was associated with marginally higher consumption of takeaway food, greater body mass index, and greater odds of obesity. The evidence clearly points to an effect of easy access and concentrations of fast food outlets on both food choice and outcomes such as increases in obesity. Forsyth et al (2012)[2] demonstrated that living near fast food restaurants has an effect on food choice, and this pattern of effect is further emphasised by work on deprived areas where the number of takeaways can be greater and access easier [3]. Concentrations of outlets in deprived or low-income areas reflect a complicated business model where operational and overhead costs are lower (Smith, 2006) [7]. At a community level the impact of concentrations of takeaway and fast food outlets are clear more chronic disease, poorer diets and increases in obesity(Caraher, Lloyd and Madelin, 2014; Forsyth et al 2012; Patterson, Risby & Chan, 2013; Winkler and Sinclair, 2008: Dunn, Mohr, Wilson. & Wittert, 2011; Ennis, Holt and Cheater, 2014; Smith, 2006; Schlosser and Wilson, 2006).[1-9]. Concentrations and use of these outlets around schools is a more contentious issue and can be dependent on school policies and the closeness of such outlets to the schools. [2, 10]. Whilst school pupils are unlikely to be consuming the majority of their calories from these outlets, there is emerging research which shows that the contribution of such outlets to calorie and sugar intake

[i] They are competitive in that they are in competition with school food - purchase and consumption can divert pupils away from eating school food.

can be considerable (Forsyth et al 2012; Winkler and Sinclair, 2008; Ennis, Holt and Cheater, 2014; Burgoine et al 2014)[2, 4, 6, 10]. Schlosser and Wilson (2006)[8] talk about fast food being essentially a '*youngster business*' with the primary focus on attracting young people. The area around schools, often called the 'school fringe' or 'school foodshed', can be influenced by local policy on fast food concentration and by school policies, which control access to the streets surrounding schools at key times of the day (Caraher, Lloyd and Madelin, 2014; Burgoine et al 2014). [1, 10].

What the work on exposure to fast food outlets does not do is explore the mindset of pupils using the food outlets or observe *how* the food outlets are used. Young people use food products and brands to project a desired identity, to signal their belonging, reinforce friendship and distinctiveness and to judge others (Adamson, Stead, McDermott and MacKintosh 2011; Ludvigsen & Sharma, 2004).[11, 12]. They also access and purchase food to express identity and reinforce friendship and distinctiveness and there is an assumption among young people that food which is prohibited is better tasting (Glassner, 2007; Ludvigsen & Sharma, 2004) [12, 13]. Adamson [11] and colleagues noted that for young people and healthy food choices, making the '*wrong*' social food choices when with their peers can expose them to ridicule and ostracism (Adamson, Stead, McDermott and MacKintosh 2011). What has not been explored, to our knowledge, are the views and behaviours of young people in situ. The issue of attitudes, locality and exposure of secondary school pupils to takeaway outlets around schools is explored in this article. The focus decision to focus on secondary post primary schools wais informed by the perspective thatbased on the knowledge that secondary school pupils, compared to primary school pupils, have more access to food outside of schools. This is due related to their spending power and their ability to access food on the way to school, during the school day and after school.

In previous work we explored the location of fast food outlets around secondary schools and the influence of food availability on food choice (Caraher, Lloyd and Madelin, 2014)[14]. This paper further explored both location and food availability, adding to current knowledge from the perspective of secondary school pupils. The competitive food environment around schools and its links to child health, particularly weight, is an on-going discussion (Forsyth, Wall, Larson, Story& Neumark-Sztainer, 2012; Patterson, Risby & Chan, 2013).[15, 16]. The competitive food environment refers to any food or drink that can be accessed, purchased and consumed on the way to/from school or in school [ii]. This can include energy or sugar sweetened drinks, crisps (potato chips), chocolate and sweets (referred to as cold food takeaway) and it can also include hot takeaway food (Winkler and Sinclair, 2008: Dunn, Mohr, Wilson and Wittert, 2011; Ennis, Holt and Cheater, 2014)[17, 18, 19]. Fast food has also been defined as burgers, chips/French fries,

[ii] They are competitive in that they are in competition with school food - purchase and consumption can divert pupils away from eating school food.

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fried chicken and mass-produced pizza; we have used the extended description of both hot and cold food takeaway as a guide for this work (Smith, 2006; Schlosser and Wilson, 2006) [20, 21].

The borough area in which this research took place is one of the 32 London boroughs. The following figures have been rounded off to provide anonymity for the schools and the borough where the research took place. . It has a population of 260,000 and a school-going population of 45,000, with 29,000 attending secondary schools. The annual public health report showed that there was a proliferation of fast food outlets in the boroughs with the highest levels of deprivation. Like a lot of London boroughs it has a mix of deprivation and areas of affluence. The local public health report indicated that nearly half of the residents and 80% of the school pupils come from Black and Minority Ethnic (BME) communities; 150 plus different languages are spoken in the local schools. An estimated 22,000 (36%) children live in poverty in the borough; 36% of children aged 10-11 years old are also either overweight or obese. The area or borough obesity average was 21% for Year 6 pupils (10-11 year olds) with the higher rates above occurring in the deprived east of the borough. Neither local nor national data is collected within secondary schools on the levels of obesity, with the National Child Measurement Programme (NCMP) only operating in primary schools collecting data on pupils in Reception (aged 4-5 years old) and Year 6 (aged 10-11 years old) (Public Health England 2015). [22] The local public health report indicated that nearly half of the residents and 80% of the school pupils come from Black and Minority Ethnic (BME) communities; 150 plus different languages are spoken in the local schools.

Methods

Multi-methods were used in this research including mapping of food outlets, in-depth observations of pupil behaviour and focus groups with pupils on their attitudes to fast food. The latter perspective constitutes what is called the *emic* perspective which is the insider's view of reality, while the observations and mapping elements constitute an *etic* or external social scientific perspectives on reality (Williams and Vogt, 2011). [23].

The methods adopted were chosen to allow for collection of data on the multiple dimensions of issues surrounding food availability and choice, but also to ensure the validity of such wide-ranging results to the same subject -(known as the triangulation of data (Williams and Vogt, 2011; Szostak, 2012; Richards, 2005). [14, 15, 24]).

The objectives of the research were:

- To map the location of fast food outlets around secondary schools.
- To observe and document food behaviours of secondary school pupils on the streets around the schools at three designated time points, morning, lunchtime and after school.

- To gather and explore the views of pupils.
- To assess the impact of lunchtime stay-on-site school policies.

The methods encompassed four approaches:

1. Geographic information system (GIS) mapping of local data to produce maps of food outlets in the borough using 200m, 400m and 800m isochrones around schools relative to indices of multiple deprivation. We also mapped the percentage of Year 6 (10-11 year olds/last year of primary school) pupils who were obese. As noted above the data was not available for secondary school pupils.
2. We used the information from the mapping to identify three schools for more detailed mapping work around the schools. Criteria for selection included:
    - Schools which had a clustering of fast food outlets.
    - Higher than average levels of free school meal (FSM) entitlement (https://www.gov.uk/apply-free-school-meals) as a proxy indicator for deprivation.
    - Evidence of high prevalence of obesity in the local area based.
3. Observation and recording of pupils' activity in food outlets around the three schools. For this we used an observation sheet, along with a map, which were used at three time points - before school, lunchtime and immediately after school (see appendix).
4. Focus groups conducted with pupils in each of the three schools, with one younger group (Years 7-9, 11-14 year olds) and one older group (Years 10-11, 15-16 year olds).

The GIS mapping involved a number of iterative stages. The first stage involved the use of local Environmental Health data on registered food outlets that were categorised as 'takeaway/fast food', retail and other, then mapping them in relation to schools for the whole of the area. To calculate the number of shops selling '*junk food',* a term used by the School Food Trust (2008) [20], we used the numbers of registered food outlets which were categorised as takeaway, grocery/mini market, supermarket, sandwiches/snacks/confectionery and newsagent, whilst secondary schools were taken to be all state-funded mainstream secondary schools. This could have potentially underestimated the number of 'junk food' outlets, as a number of food outlets which sold alcohol (known as off-licences) may also have sold sweets and confectionary and many operate in a similar fashion to grocery/mini markets; additionally some takeaway outlets might have been classified as restaurants if they had seating, leading to potential further under-counting. The concentration of 'junk food' outlets were in the east of the local authority area, so it is likely that the concentration of all outlets were much higher in that part of the borough. This data was then over-layered with the indicators of free school meals (FSMs), local obesity figures for Year 6 pupils and a United Kingdom-wide deprivation indicator called the Index of Multiple Deprivation (IMD) 2010 (data for all areas of England can be found at www.gov.uk/government/collections/english-indices-of-deprivation). Data from the National Child Measurement Programme (NCMP) shows that obesity prevalence among pupils in both

Reception and Year 6 (10-11 year olds) increases with increased socioeconomic deprivation (measured, for example, by the IMD 2010 score). Likewise the same data sets shows that obesity prevalence of the most deprived 10% of the general population is approximately twice that of the least deprived 10%. From these issues it emerged that schools in the east of the borough had higher levels of FSM entitlement, and were located in areas of deprivation and had more fast food outlets (FFOs) clustered around them. Three schools were identified for more detailed mapping, with outlets mapped within 200m, 400m and 800m of the school (these are called isochrones). The map in Figure 1 below shows the spread of FFOs (note 'takeaway/fast food', retail and other) around the selected schools and their proximity to schools, combined with local deprivation data.

The three schools were approached and provided with information concerning the research and permission was sought from head teachers to run focus groups, along with their approval to conduct observations around the schools. Having gained their approval we then distributed information letters and consent forms to all pupils identified as likely to take part in the focus groups. Pupils in exam classes were excluded. At this point we asked for information on pupil numbers, FSM allocation, lunchtime stay-on-site policy and copies of any documentation on school food policy..

Observation and recording of pupils' purchasing activity in food outlets around each school occurred at three time points; before/after school and at lunchtime. Two groups of paired observers (MSc students with subject knowledge) were used to observe the pupil purchasing activity around each school, one group for each school; each school observed once. Paired observers ensured inter-coder reliability, with consistency in observations and reporting. Observers were provided with pictures of each school's pupil uniform to allow accurate identification of the school each pupil attended, alongside a structured observation data sheet (see appendix). Observers recorded the location of food outlets on the main streets around schools via a hand-drawn map and a paper copy of a Google map, and then recorded the numbers of pupils observed and the type of food outlet they entered. The combined data demonstrated how far pupils walked from the school premises to their preferred food outlet, and also provided an accurate number of FFOs around the schools.

Descriptions of special meal offers in food outlets were also noted along with prices and any distinguishing features such as specific targeting to pupils. All data was entered into NVivo (2014) [25] and analysed along with the data from the focus group interviews; the data was not treated separately but used as a whole body of evidence e.g. for each map a verbal description was entered, along with the map and the notes that the observers recorded. The maps and observations of the shops pupils used were also compared to the GIS data.

In each school we ran two focus groups, one with Year 7-9 pupils (11-14 year olds) and one with Year 10-11 pupils (14-16 year olds). In total we interviewed 36 younger and 36 older pupils. All

pupils were self-selected and permission from parents/guardians to speak to the pupils was obtained. All focus groups lasted 50 minutes (during class time). The age range was chosen in order to gather data about differing health-related behaviours in different age groups. All of the groups were of mixed ethnicity with representation from more than ten ethnic backgrounds including Caribbean, Turkish, Somalian, Bangladeshi, Saudi Arabian, Polish, Brazilian, White British and mixed race. The groups were overall equally split between girls and boys.

The focus group sessions were split into two activities, mapping and discussion. For the first activity each group was asked to put crosses on a map to indicate the location of shops they or their friends purchased food. They were then asked which food outlets they used on the way to school, at lunchtime and on the way home. This allowed the cross-check with the GIS mapping and the observational data.

The topic guide for the focus group discussion included the following:

- Food-related activity at three points across the school day (before school, lunchtime and after school).
- The types of food purchased before school and on the way home.
- What food could be taken into school and eaten on the school premises.
- Their experiences and stories of eating either a school-purchased or packed-lunch (pre-prepared cold lunch) in the school grounds.
- The purchase of food and drink outside school at lunchtime.
- Attitudes to food, healthy eating and takeaway foods.
- The amount of money spent on purchasing food inside and outside of school.

The responses were recorded, transcribed and analysed using the data analysis software package NVivo, through which themes were drawn out (Richards, 2005; NVivo, 2014). [26, 17]. There was an iterative relationship between the in-depth observational data and the focus groups. The focus groups helped shed light on the pupils' reasons for using certain types of food outlets and their food choices. The lead author (MC) undertook the initial analysis, which was then agreed with SL before being circulated to the rest of the group for further comments and refinement. Both the maps and discursive accounts from the focus groups were used to check the data from the GIS and observational mapping processes. Techniques associated with thematic content analysis and grounded theory were used to analyse the data within this framework first round analysis involved the use of open/in-vivo coding based on the respondents' own words; emerging themes and make interconnections across accounts from the focus groups including the maps produced by students in the focus groups and the observational study notes and observations of purchasing behaviour. Second round analyses focused on more detailed coding to interpret the meaning of, and relationships between, the initial themes and patterns between schools. We found that the data could be incorporated within the 5As of **A**ccessibility, **A**vailability, **A**ffordability and **A**cceptability and **A**ttitude, which can be applied to the choices pupils make.

The content analysis of responses and observations mapped well onto these five key headings. It is important to note that these were not predetermined headings but emerged as useful ways of summarising the analysis.

The final structure of the article involved incorporating the findings from the various aspects into a coherent structure which allowed the data from the various approaches to be combined so that there was an interaction and a sense of different perspectives (etic and emic), which could contribute to a complete picture of pupil behaviour.

Ethical approval was obtained from the School Research Ethics Committee for both the focus groups and observational data collection processes. As part of this approval permission was sought and granted from parents of all those taking part in the focus groups as well as the permission of head teachers. We have removed identifying details from the borough and the schools to preserve anonymity, as this was a condition of the ethical approval from the University.

Findings

Themes from the data emerged under the five headings of **A**ccess, **A**vailability, **A**ffordability and **A**cceptability and **A**ttitudes, these which categories have been used in previous research on food deserts to describe the issues from access through to consumption (Caraher, Lloyd and Madelin, 2014; Handy and Niemeier, 1997). [1, 16, 17]. These themes are addressed below.

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Access – school stay-on-site policies

The observed schools provided detailed background information on pupil numbers, stay-on-site policies and the percentage of pupils eligible for free school meals; used in the UK as a measure of disadvantage and poverty (Gorard, 2012)[27]. Information is presented in Table 1.

Table 1: School Food information

School Food	School A	School B	School C
School pupil numbers	1050	1200	1250
Free School Meal (FSM) ** allocation	39% of pupils eligible	60% of pupils eligible	50% of pupils eligible
Stay-on-site policy	Year 7-10 closed gate Year 11 open gate	Year 7-9 closed gate Year 10 – 11 open gate	Year 7-11 closed gate (entire school)

*the London average for FSM entitlement is 22% and the UK average 13% (London's Poverty Profile.) [28].

**FSM is used as a proxy indicator of deprivation in an area

All three schools reported stay-on-site policies operating at lunchtime for Years 7-9 (11-14 year olds) and whilst School C did not permit any pupil to leave the school grounds, Schools A and B gave varying permissions for older pupils. Our observations of the schools confirmed that pupils from School C did not leave the premises during lunchtime. Older pupils from School B did leave the premises but many of the fast food outlets were not within easy walking distance and the

pupils reported from the focus groups *'not being bothered to walk to a fast food outlet'* if it was too far away from the school gates. Some pupils reported staying on-site at lunchtime for that reason. In contrast older pupils from School A left the premises and were observed using fast food outlets; particularly takeaways in large numbers. Analysis of the pupils accounts and mapping from the focus groups combined with the observational mapping of their activities showed that 300m was the maximum distance they could reasonably walk to and from school at lunchtime, our observations found that 200m was a more favoured distance, which allowed pupils sufficient time to walk, socially engage, queue for food, eat it and walk back to school. This distance was confirmed by combining observational data with feedback from pupils in the focus groups and the formal GIS mapping data. 400m Four Hundred metres is the distance used by industry as the maximum people will walk (estimated at 15 minutes with shopping) to access food; this is without the limitation of a lunch hour (Handy and Niemeier, 1997)[29].

There was lunchtime buying activity around the two schools that operated more lax stay-on-site policies and where takeaways and other shops were close to the school gates. There was less buying activity around the school where shops were at least 300m away. The focus groups backed these observations. Pupils in one of the focus groups said:

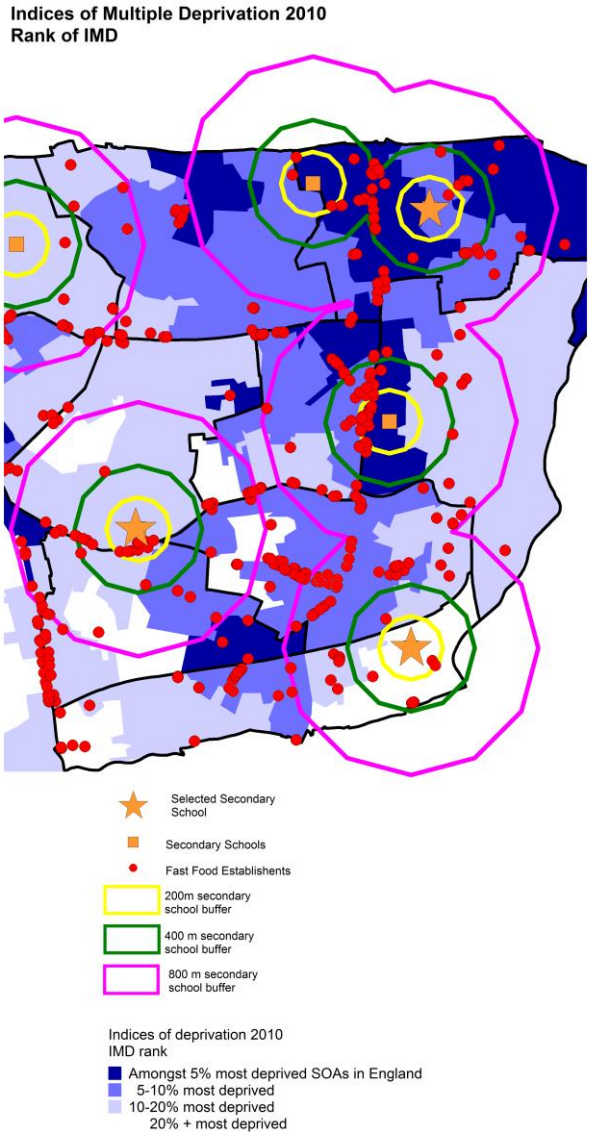
> *Because it's closer to the school and students really can't be bothered to walk that far to get food.*
>
> *Focus group leader: Right so it is quite close. If there was something else close do you think you would go there?*
>
> *Yeah Sainsbury's* [a national supermarket chain] *or the corner shop.*

In the focus group sessions, some younger pupils reported asking older pupils to purchase food for them outside the school, and explained that older pupils '*tax*' younger pupils when they buy food by eating a proportion of the food or charging a price above the food purchase price. The food was then not perceived as good value for money. Unlike other research we found little widespread evidence of a 'black market' in junk food [30], as the 'tax' levied by the older pupils made it a less attractive option (Fletcher, Jamal, Fitzgerald-Yau and Bonell, 2013).

Availability – concentrations of outlets and links to deprivation

In the whole of the borough there were 518 fast food outlets, which comprised of 183 takeaway outlets and 335 other retail food outlets e.g. grocery stores, supermarkets and newsagents. Using the methodology from the School Food Trust this provided a ratio of 39.8 outlets per school; higher than the ratio of 38.6 for the 10 *worst* English local authorities and the average 25 outlets per school. It is in excess of the London ratio of 36.66 outlets per school, which the observed borough was part ofincluded the borough but which provided no breakdown at the borough level (School Food Trust, 2008) [31]. Figure 1 shows how the outlets were clustered around the schools.

Figure 1: Selected secondary schools showing fast food concentrations (stylised map to remove identifying features).



The data reflects similar findings in other areas of the UK where a relationship between deprivation, fast food outlets and obesity has been found. The fast food outlets tend to be located in areas of higher deprivation as shown by Figure 1 above, which details the location of schools and fast food outlets overlaid on a map of Super Output Areas (SOAs), coloured according to the national ranking of the Indices of Multiple Deprivation 2010 (IMD).

Mapping and observations around the three schools showed several food outlets to be within 300m of the school gates. School A had 3 outlets within 200m and an additional 15 within 400m;

School B had 2 outlets within 200m and an additional 3 within 400m, finally School C had 7 outlets within 200m and an additional 5 within 400m. Discrepancies between the formal GIS mapping and observations can be accounted for by local authority databases not being up-to-date: some outlets selling food as well as a range of other goods such as 'bargain' shops (commonly called 99p or £1 shops, due to their offer of a variety of goods at a reduced price) were not registered as food premises.

Affordability – consumer mindset and bargains

An issue that arose across all the focus groups was that those interviewed operated within a framework of a consumer with choice. In this respect school food, for those who paid for it, was viewed as poor value when they could have a meal from nearby takeaways for half the price. Choice and convenience was exercised in a number of ways:

- Skipping breakfast to buy food on the way to school, without having to queue or go to the school breakfast club.
- Skipping lunch at lunchtime, to save money for after school, which provided more time to engage with peers.

The following responses from a Year 7-9 focus group displayed some of the concerns with price, quantity and value:

Focus Group Leader: Can I ask, how much are the burgers at XXX?

Two for £2.

And chips.

Focus Group Leader: How much are the chicken and chips?

Sometimes £1.50.

Or £1.20.

A similar response was received from another school's Year 7-9 focus group:

A kebab shop, XXX they do meat and chips at lunch for us for £1.50. On a normal day it would be £3.

But they reduce it for us.

This was the school with the fully operational stay-on-site policy, so this special offer was for after school.

As consumers, value mattered to the pupils and another way this was judged was by amount and size of portions. One Year 10-11 focus group participant said of food available from nearby takeaways '*they have these massive cookies and they're 50p so I like that*'. Another student said when buying bags of sweets that the supermarket offered better value and that '*I usually buy the big ones in Tesco* [a national supermarket chain]…. *so we pay together, 25p each*'. This was of course related to the amount of money they had available and various stories emerged in the focus groups; many pupils reported being given a specific food allowance for meals alongside a

more general pocket money allowance. It seemed to be the norm that pupils received from parents about £2/day for meals and between £10 and £12/week for general pocket money. The following extract from a focus group with younger pupils illustrates this:

Well my dad gives me and my brother both money, normally it's £2 a day sometimes he gives us £5 to share, sometimes £10 to use for two days.

Well I'm free school meals but my Dad normally gives me like £10 a week just as...

I usually have £5 or £10 a day.

I don't really get money on week days but every Saturday I get like £10.

Like on Monday in the morning I usually put £10 on my account and then like somewhere in the week I'll bring like an extra £2 to get something.

Right so about £12 a week maybe, something like that.

In another group in another school one pupil said '*the less I spend on food the more I got*'. Some reported buying food bargains so they could add their food allowance to their general one.

All of this was usually bounded by knowledge that such options were not healthy, which was a feature of feedback in the focus groups. One Year 10-11 focus group talked about the changes to school food since the introduction of the school nutrition standards as resulting in less value:

And the drinks were bigger before.

They're like that much. [Indicating with their fingers how small the portion is].

A little cone.

Even the water bottles, they changed it. They now made it smaller.

They made the water bottles were 500ml now they're like 330ml and they're 60p so it's cheaper in like a corner shop. So the school's ripping us off. They're taking advantage of us. Cos they know that we have to buy it from them.

A key aspect of how many of the pupils operated as consumers was their concern with special offers. Meal deals and some of the '*buy two for one'* offers were targeted specifically at pupils. This encouraged some pupils to buy in groups, as well as reinforcing the consumer mindset of 'value for money'. The buying of two for one drinks and three packets of crisps (potato chips) for £1 encouraged pupils to buy and share. One observer commenting on the inside of a newsagent shop which offered various crisps as a 'three packets for £1' offer, with crisp boxes stacked one on top of another and going from floor to ceiling, recorded in her notes as '*truly a wall of crisps'*. There was also some indication of smaller portions being targeted at pupils as in the advertising offer of a Turkish pizza (lahmachun) for £1.50 or 'chips and meat for £2'.

Attitudes and Acceptability - pupil's purchasing behaviours

Purchasing before school.

Observations around the three schools found that there were purchasing activities in the morning around all schools, and less than anticipated purchasing activity during the lunch hour period, except at the school with the most relaxed stay-on-site policy. After school there was

more extensive purchasing activity on the streets around the schools. Across all three time periods but especially the lunch and after-school periods we observed that pupils tended to shop in groups, some of which was in relation to buying and sharing meal deals, eg 'two for one' offers. This behaviour links to the bargain seeking mindset already discussed. Observations of individual time periods are discussed below in more detail. The majority of the activity was 'cold food' from shops; few takeaways were open in the early morning although there was some activity around restaurants and cafés by a small number of pupils. Observers noted that the purchases appeared to be a substitute for breakfast in the form of rolls, muffins and sausage rolls, which was supported in the focus groups. Pupils provided reasons for the purchases and our analysis categorized them under three headings, 1) to substitute for breakfast, 2) to have some food for later in the morning and 3) to buy lunch. A key feature of the morning purchases was the amount of chocolate, crisps (potato chips), carbonated soft drinks and sport or energy drinks purchased. Observations highlighted that apart from the purchases from the café/restaurant, the majority of purchases were in groups, ranging from pairs to larger groups of eight to ten pupils.

Two points of interest arise. One 'bargain' shop (a so-called '*Pound shop'* selling household items) sold energy drinks, no other drinks or food, and had a '*three energy drinks for £1'* offer. The shop was very popular with pupils. Other multiple offers such as the three packets of crisps for £1 deal, already described above, were used by pupils to spread cost and share the goods. Such offers were available throughout the day. Table 2 and Figure 2, below contain examples of the notes taken during the morning observations.

Table 2: Observations of food purchasing before school.

	School A		School B		School C	
Outlet	Nos pupils observed	Type of food / drink	Nos pupils Observed	Type of food / drink	Nos pupils Observed	Type of food / drink
Restaurant/ Café/	9	Rolls Muffins/cakes	52	0	0	Rolls, sausage baguettes Muffins
Newsagent/ local super-market	140	Bags of Crisps Energy drinks and bags of sweets, crisps (potato chips) and energy drinks	0	Energy drinks sweets (large bag)	55	Sweets, lace-sweets and crisps (potato chips)

Figure 2 Notes from the morning observation of purchasing behaviours

School A: Early in the morning pupils arrived by bus and by foot. They tended to use the shops located near the school, although some of the older pupils used the café. The vast majority of pupils used the XXX* Food Centre, the XXX Food Centre, XXX Supermarket, the Pound plus store and the Sainsbury Local all of which were within 200m of the school. Pupils mostly bought snacks such as crisps, soft/sports drink, and chocolate bars. Two of the premises used were off-licenses and so weren't included in the number as food outlets in our original count. There were two points of interest. The Pound Plus shop only sold energy drinks, this shop was very popular with pupils. The newsagents had a created a 'wall' of crisp boxes in the shop, bags of crisps were on offer 3 for a £1.

School B: Early in the morning the vast majority of pupils arrived via the overland tube or bus stops to the north of the school on XXX Road. XXX was the only shop which was used, which is located outside the 200 metre zone around the school. Pupils were observed purchasing energy drinks and sweets, the energy drink section of the shop was restocked several times during the observation period; the shop also had special offers on sweets. Pupils could buy a large bag of sweets for £1. The numbers of pupils purchasing were less than at School A the possible reason that the shop is located 300m from the school. The walk from shop XXX to the school takes approximately five minutes and pupils generally made the walk in groups.

School C Most pupils arrived by bus or on foot. The majority of food was purchased from newsagents and supermarkets but many of the pupils didn't make any purchases at all. Those who did buy food bought cans of drinks, crisps and 'laces' [liquorice strips]. There didn't seem to be any particular pattern of purchasing and less pupils purchased food going to School C than they did at School B, this may be due to the majority of shops being sited more than 200m from the school. As was observed outside the other schools pupils tended to be in groups of two or more.

* names of shops have been removed to avoid identification of the area and schools.

Crisps (potato chips) chocolate and drinks including energy/sport drinks were reported as the most common purchases by pupils in the focus groups. Younger pupils reported buying more energy drinks than older pupils, which were often a less expensive brand (e.g. Boost) than a major brand such as Red Bull. Some of the reasons provided in the focus groups for the purchase of energy or sport drinks included:

- '*To gain energy'*.
- To '*stop falling asleep'* in the late morning/early afternoon.
- As a brand image/to be '*part of the gang*'.

At one school pupils reported that energy drinks were confiscated if discovered, so those purchased were consumed on the way to school. The other two schools operated a ban on the consumption and outward display of energy drinks.

Lunchtime purchasing.

Table 3: Observations of food purchasing outside the school during lunchtime

	School A		School B		School C	
Outlet	**Nos. pupils Observed**	**Type of food / drink**	**Nos. pupils observed**	**Type of food / drink**	**Nos. pupils Observed**	**Type of food / drink**
Takeaways	80	Chicken and chips, Burger and chips, chips	30	Special offers on meat and pizzas	0	0
Restaurant cafe	55	Snacks and crisps	16		0	0

Newsagent/ local super-market			28	Energy drinks, crisps	0	0

What can be seen is the effect of a closed gate policy in School C with no observed lunchtime activity. The switch from the buying patterns in Tables 2 and 3 above shows two main themes - a shift from cold food takeaways to hot food and a move from sweet food such as muffins to more savoury foods. The use of outlets also shifted from cafés to takeaways over the period of the day and continued, as will be seen below in Table 4, to purchases after school. The move to hot food takeaways can be explained by the fact that in the morning period hot food takeaways were not open, so a lot of the activity was focused on cafes. All observers noted that at all sites and specifically at lunchtime the purchases of food by pupils tended to be in groups.

There was general recognition of the changes to the quality and healthiness of school food, that the food on offer was healthier than previously offered and certainly more healthy than that from the takeaways surrounding the schools. But such views were contrasted with a concern and consumer mentality in getting a bargain, these views were often expressed by references to the cost and portion sizes of some of the food on sale in the schools. A Year 7-9 focus group reported:

> *I mainly buy one of those, they're trying to promote these new drinks, these orange drinks and they're meant to be healthy for you, one of your five a day so they're better than drinking Lucozade so I try and drink them but they're so expensive. 80p for that.*
> *60p for like this* [indicating size with fingers] *and imagine you can get 50p for a whole can or something.*
> *It's only this big and you can finish it in one sip.*
> *Those juice boxes.*
> *60p?*
> *There used to be ones that were that big.*
> *They were nicer.*

Across all three schools the pupils reported dissatisfaction with the dining room environment as well as the taste of school food. Dining rooms were not judged to be conducive to sitting with friends and socialising '*with your friends*'. This was generally due to the numbers using the area and the lack of quiet areas in which to have a conversation. Additional reasons for eating out at lunchtime included seeking a bargain, as a sign of independence and for the older pupils, as mark of distinction from the younger pupils. One older group of pupils described it in the following ways:

> *You have to wait and queue, there are lots of younger ones and we have to wait to get served.*
> *Yeah and the noise is too much, you have to shout out loud.*
> *……. It is easier to go down the high street.*

After school purchasing

Our observations on purchasing after school confirmed that the majority of activity was at this time. The total number of pupils at each of the schools respectively was 1050, 1200 and 1250 so it was expected there would be broadly similar activity outside each school. Similarly it was assumed that not using fast food outlets during the school lunchtime would increase pupils' desire to eat from them after school, but these were not borne out by our observations. Overall usage after school is shown in Table 4.

Table 4: Observations of food purchasing after school

	School A		School B		School C	
Outlet	**Nos. pupils observed**	**Type of food / drink**	**Nos. pupils observed**	**Type of food / drink**	**Nos. pupils Observed**	**Type of food / drink**
Takeaways	145	Chicken and chips, Burger and chips , chips	2	Chicken and chips	33	Chicken and chips
Restaurant/café			0			
Newsagent/ local super-market	85	Crisps, chocolate	66	Sweets and Potato crisps (chips)	100	Crisps, chocolate

At School C (with the complete stay-on-site policy), only 33 pupils (3% of total school pupils) were observed in fast food takeaways with another 100 pupils using local shops (11% of total pupils). The schools with a partial stay-on-site policy had higher levels of use after school – in one school 21% of the pupils were observed in fast food takeaways or local shops (Forsyth, Wall, Larson, Story and Neumark-Sztainer, 2012; Patterson, , Risby, and Chan, 2013). [32, 33]. The most common food purchased was chicken and chips. Pupils formed long queues and in the most popular takeaway, a teacher from the school supervised the queue. This ensured that the pupils behaved as good citizens, although it also potentially gave the purchases an air of respectability. Large numbers of pupils were also observed in newsagents and supermarkets, where the main purchases were soft/energy drinks, chocolate bars and crisps (potato chips). All outlets used were within 200m of the school gates. Observations confirmed an absence of salads and fruits, which in the focus groups were perceived as poor value for money. Instead, of all the purchases observed, there was a clear desire for cheap, palatable and energy dense food; food known to be of poor nutritional quality and high in calories (Caraher, Lloyd and Madelin, 2014, Wellard, Glasson and Chapman, 2012) (1, 4).

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Eating after school was discussed by many pupils in the focus groups as a snack to tide them over before eating at home later on. Our observations only monitored food outlet use in the immediate area around schools, but it is likely that many purchases were made on the way to school via

unobserved routes. From the focus groups and observations the distance of a food outlet from the school did influence the use of that outlet, but this was less of an issue after school when an outlet might have been on the route home. This was outside the scope of our observations but was reported in the focus groups.

Discussion

As noted earlier in the introduction there is a connection with obesity, life expectancy and fast food outlets. The key is to look to determine how these obesogenic environments can be controlled (Alcorn, 2012; Mitchell, Cowburn and Foster, 2011; Stevenson, 2011). [34, 35, 36]. The National Obesity Observatory (in 2012) mapped fast food outlets for England and was able to concluded that there is a relationship between the number of fast foods outlets per area (density), the obesity status of children and areas of higher deprivation [9]. Deprived areas tended to have both higher concentrations of fast food outlets and higher levels of childhood obesity (Zenk, and Schultz, 2009; Burgoine et al, 2014). [11, 37]. Understanding the motives and rationale of secondary school studnets is important in helping inform policy. What this research adds is an understanding of what and how pupils conceive the issues of distance, the foods on offer and the wider values surrounding the sociability of food. Linked to these findings are the seeking of a bargain (consumer mindset) and value for money, often equated with volume, differing age attitudes as to what is 'cool' and buying goods in groups (Adamson, Stead, McDermott and MacKintosh, 2011). The environment outside the school can be seen to take two forms; first the existence and availability of '*competitive foods*', those foods which compete with food sold in the school; secondly, the proximity of food outlets to schools. Across the borough there were concentrations of fast food outlets around schools. However the majority of food purchases were from newsagents, corner shops and supermarkets in the form of sweets, crisps (potato chips), sandwiches, chocolate, carbonated soft drinks and energy drinks, not hot food from fast food outlets. The majority of purchasing was 'cold food'. This in contrast to the body of existing research where the focus is on fast food and take-aways, (Forsyth et al, 2012; Patterson, Risby and Chan, 2013; Ludvigsen, and Sharma, 2004; Dimbleby and Vincent, 2013), the observations of the young people's behaviours showed differences in purchasing at different times of the day and the use of different outlets at different times. Much of the existing published literature uses formal mapping systems and the data available from local government registration of fast food outlets. There is clearly a case for looking at the nutritional content of fast food as it is nutrient dense (Wellard, Glasson, & Chapman, 2012) but there is also a need to map secondary school pupils' purchases of food from other outlets which can be as unhealthy as that from fast food outlets.

Mapping such behaviours should also extend to soda and energy drink access and consumption (Ennis, Holt and Cheater, 2014) Health-related behaviours associated with energy drink

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consumption are use of alcohol and/or binge drinking, smoking and substance use (Azagba and Sharaf, 2014; Petrova, Duleva, Dimitrov and Rangelova, 2013). The purchasing of energy drinks by younger pupils (Years 7-9, 11-14 year olds) was based on assumptions about sport, energy, keeping awake, branding and a concern with cost, with premium brands e.g. Red Bull being passed over in favour of cheaper ones such as Boostbrands. These findings are similar to those of Costa and colleagues whose research suggests that these drinks are 'normalised and perceived as necessary to meet the demands of a busy lifestyle' (p.187) and that they are readily accessible from local shops, supermarkets and vending machines in public places (Costa, Hayley and Miller, 2014). Older pupils in the focus groups considered energy drinks as not '*cool'*. The observed outlets for energy drinks were often not ones we had considered e.g. 'bargain' shops selling household items and toys and selling them in bulk. This was reinforced with stories from the focus groups. Some of tThese shops are often not registered as food premises on local authority databases and it was only through empirical observation that these sources were identified. Any efforts to restrict openings of food outlets may need to address two points arising from this, the fact that many shops selling energy and soda drinks are often not registered premises and may also be within limits such as 200m or 400m of the school gates (Ennis, Holt and Cheater, 2014).

Recently, the term 'foodshed' or school fringe has been revived as a way of looking at and thinking about local, sustainable food systems (Caraher, Lloyd and Madelin, 2014: Caraher, O'Keefe, Lloyd, and Madelin, 2013; Winkler and Sinclair, 2008). (1). We use the term 'school foodshed' to represent the area from which school pupils can obtain their food, it also draws on the old notion of the 'school shed' where often illicit and frowned upon activities were conducted. The foodshed for those living in urban areas has expanded to take account of developments such as accessible shops, longer opening hours and fast food outlets on the way to school. There is body of work on the location of shops and fast food outlets within 400m of a school or house, based on the assumption that shoppers will not walk more than 400m from base to the nearest shop or stop (Morland, Wing, Diez Roux, and Poole; 2002; Melaniphy, 2007; Public Health England, 2013).[38] [39] In essence the foodshed has widened for young people; they now have the power to source their food from a wider variety of outlets than in the past which were confined to school and the home, their obesogenic possibilities have widened (Maher, Wilson, and Signal, 2005.). A pupil's foodshed is now like a series of tributaries which feed into their main food stream and which they purchase from on the way to and from school. Such behaviours are aided by their power as consumers and the fact that they have more money available via pocket money and good food deals, to spend on food. This introduces a limitation to our work in that we only observed the pupils' behaviour within a 400m radius of the school gates and not on their 'complete' trips to and from school. Some of the stories in the focus groups did relate to a wider foodshed: on the way to school and after school pupils frequently mentioned McDonalds as a site to eat and congregate. None of these McDonalds were within 400m of the schools.

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The findings show that the key issues of food choice relate to the '5A's of **A**ccessibility, **A**vailability, **A**ffordability and **A**cceptability and **A**ttitude, which can be applied to the choices pupils make.

Accessibility in terms of being able to access fast food off the school premises due to school stay-on-site policies not being fully implemented; the range and number of food outlets within 300m of the school. This also covers the issue of convenience where many pupils purchased food in cafés as a substitute for breakfast. Closed gate/stay-on-site policies determine access to food on the streets surrounding the schools especially at lunchtime. In the two schools with partial stay-on-site policies the pupils reported not wanting to travel more than 200m at lunchtime to access a shop or takeaway. The school with a policy of keeping pupils on site had less usage on the streets surrounding the schools at lunchtime [40]. From morning to after school the type of food premises open varied and student choice varies accordingly, the morning consisted of purchases from shops and cafes, lunchtime and after school activity shifted to hot fast food. This accessibility overlaps availability.

Availability in terms of fast food (hot and cold) and unhealthy options being a feature of each street near the schools and especially within 200/300m of the school gates. The favoured distance from the school was within 200m to allow time to walk there, queue, consume the food and walk back.

Affordability in that the foods that are the focus of this research are marketed at pupils and offered as meal deals e.g. 99p for a meal/three packets of crisps (potato chips) for £1, aligned to the belief that school food represents poor value. The pupils operated with a consumer mentality and sought out what they perceived as value for money offers. This often equated to more food for less money.

Acceptability and Attitude in that school food is not seen as 'cool', queuing for school food is not acceptable but queuing for fast food is. For younger pupils energy drinks were cool, and none of the deals available from the takeaways emphasized healthy; the focus was on value for money. Pupils reported as expensive healthy items on sale in the schools such as fruit juice and that it was often in smaller portion sizes than that available from outside school. Aligned to this was the fact that group purchasing and sharing was encouraged by the '3 for £1*'/'buy one get one free'* offers. Pupils in the focus groups generally recognised that school food was healthier but provided reasons for not eating in school dining rooms related to the lack of opportunities to socialise and dissatisfaction with the general dining room environment. Likewise with sugar sweetened drinks there was less awareness of the sugar content but a vague awareness of them being less healthy than fruit juices or water [41].

Structural solutions lie in the control of the external environment through regulation of competitive foods and the competitive food market around schools. Not only does public health practice need to address these issues but also needs to work in a smarter way to provide 'nudges' to healthier eating (Thaller and Sunstein, 2008) [42]. This should include incentives and removing the pupils' tendency to view school food as bad value or non-competitive. The impacts of the

closed gate policy operated by the schools can be seen at lunchtime on nearby streets with fewer groups of pupils wandering the streets where this applied. We also noted the ways in which pupils circumvented these rules by asking others with permission to leave the school grounds at lunchtime to buy food in for them, to buy on the way to school and by taking in food in their lunchboxes. So closed gate policies while essential, are not on their own sufficient. Mintel reported that children, on average, have around £6.50 weekly to spend. The older, more independent school pupil who is able to travel to and from school alone thus has the means to purchase snack items in addition – or as an alternative to – consuming snacks provided for them at home (Mintel, 2013) [43]. Boys were more likely to spend their money on food and non-alcoholic drinks, but both groups reported spending up to one third of their money on food and drink outside of the home (National Statistics, 2002) [44]. This helps set the context for the spending patterns of secondary school pupils and locates issues of availability and access in the context of adolescent spending patterns, even in areas where greater levels of deprivation may mean that pupils have less money available to them for the purchase of food. This can be contrasted with the amount provided by parents to pay for school meals, which in 2012 was £2.20 per day (National Statistics, 2002; Mintel, 2013)[35, 36]. What remains clear is that young people as a group remain an important target group for the food industry for snack food and remains, according to Mintel '*an untapped market'* (Mintel, 2013). [35]

The nutrient content of school meals are regulated and standards established (Dimbleby and Vincent, 2013). [45] However it is clear that these standards can only be enforced within the school premises, not in the wider school foodshed. We had accounts from focus groups of some pupils avoiding school lunch altogether and waiting to eat from a hot food takeaway on the way home. Others reported that they ate from hot food takeaways on the way home as they were hungry due to the small portions served or consumed at lunchtime. Whilst we know that food from home generally has a higher micronutrient density than food purchased outside the home (Adamson, Rugg-Gunn, Butler, and Appleton, 1996)[46], there is a danger that this calorie intake is additional and not a substitute. This raises concerns that the food consumed is high in calories, fat and sugar and not replaced elsewhere in the diet by micronutrients. The new 'independent' School Food Plan [37] will make changes to the food offered in schools and states that "*The flagship schemes will also co-ordinate activity in the wider neighbourhoods: for example working with local take-aways and fast food outlets to make their products healthier, and teaching parents and people in the local community how to cook."* (Dimbleby and Vincent, 2013) But this only applies to the flagship schemes of which there will be two in London. There is little joined up thinking about using planning powers to help restrict new openings or of the use of local by-laws to limit opening hours (British Medical Association, 2015; Alcorn, 2012: Caraher, O'Keefe, Lloyd, and Madelin, 2013). [47, 48]. Pupils expressed dissatisfaction with the value for money of school lunches and the overall dining room environment experience (Devia, Surendera and Rayner, 2012) [49]. The quality of the food was almost secondary to concerns about volume, value,

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queuing, lack of adequate time to sit and eat and the noise in school dining areas. Some of these may be addressed through the regulation and the setting of standards for school food on school sites, but the environment surrounding schools needs to be addressed. Even if all schools invoke stay-on-site or closed gate policies for lunchtime, there is a need to be cognisant of the behaviour and purchasing behaviours of pupils on the way to and from school. An understanding of the rationale for the behaviours, provided here in the accounts of the pupils is necessary for effective public health action. Some of this behaviour is driven by what is available and on offer, for example the group purchasing behaviour we observed was driven by the dual needs of seeking a bargain and the fact that many of the food offers were sold as meal deals or buy one -or more-and get one free.

Specifically what this research adds is that the issue of distance and location near a school does matter, age group attitudes to food differ and what is 'cool' correspondingly differs. There is a mindset of consumer value and choice amongst pupils; eating with friends and being able to socialise does matter. Finally while distance matters it does not trump access and limiting access to shops through the mechanism of stay-on-site/closed gate policies (at least at lunchtime). The development of stay-on-site policies should be considered alongside working with outlets to improve the food offer to pupils.

The findings show that the key issues of food choice relate to the '5A's of **A**ccessibility, **A**vailability, **A**ffordability and **A**cceptability and **A**ttitude, which can be applied to the choices pupils make.

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Conclusion

Our research findings portray a situation where secondary school pupils have preferences and these can be summarised as, if left to their own devices, eating virtually all of what they like 'a lot', about half of what they like 'a little' and almost none of what they like 'at all' from school lunch choices (Domel Baxter and Thompson, 2002) [50]. These preferences can be exaggerated by the economic freedom of pupils to act as consumers without safeguards. In the focus groups there was a reporting that pupils did not spend their own pocket money on food consumed to, in and on the way from school; additional money of up to £3/day was given to pupils by their parents to spend on food, distinct from their 'pocket money'. There is both a role for schools and parents here, in that perhaps parents are not aware of the food decisions their children are making. Key to the data is the issue of distance and time, as pupils factored in walking distance, meal deals, queuing for food, eating and walking back to school as reasons for choosing where and what to eat. Outlets more than 200m from the school gates were less likely to be used at lunchtime.

~~Pupils expressed dissatisfaction with the value for money of school lunches and the overall dining room environment experience [51]. The quality of the food was almost secondary to concerns about volume, value, queuing, lack of adequate time to sit and eat and the noise in school dining areas. Some of these may be addressed through the regulation and the setting of standards for school food on school sites, but the environment surrounding schools needs to be addressed. Even if all schools invoke stay on site or closed gate policies for lunchtime, there is a need to be cognisant of the behaviour and purchasing behaviours of pupils on the way to and from school. An understanding of the rationale for the behaviours, provided here in the accounts~~

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Individual decisions are of course only part of the picture. The food that is accessible, available, affordable and acceptable to pupils is also partially determined by their surrounding environment and the direct targeting of food to pupils. This makes a case for public health action to regulate the environment and to work with existing outlets to help them improve their food offer and to make it more healthy while still making a profit. Work within schools needs to be matched by controls and changes to the school foodshed.

A strength of the current research was the triangulation of both research methods and findings from the different approaches to develop an overall picture of behaviours, so comparing GIS mapping with observational data alongside reports from focus groups. The research reported here was limited by the observations around the schools and the fact that it did not track pupils' behaviours from the time they left the home in the morning and their behaviours on the way home. Future research should address the relationship of food from take-ways within the context of the whole day and the possible displacement of healthy options by the competitive food on offer around and on the way to and from school.

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Appendix

OBSERVATION OF FAST FOOD OUTLETS/TAKEAWAYS

Please record the following information before conducting observations:

Name of school:

Observer names:
Date:

Time of observations:
From 08:00 - 09.00
12.00 - 13.30
15.30 - 16.30

Names of roads observed:

Please sketch a rough map

OBSERVATION NOTES

Which schools have you seen?

I – Please tick if you see pupils from the school, regardless of whether they enter a takeaway.

School	√
School A (XXXXXXXXXXXXX coloured uniform with school logo on jacket pocket)	
School B (XXXXXXXXXXXXX coloured uniform)	
School C (XXXXXXXXXXXXX coloured uniform with XXXXXXX coloured tie)	
Other: please write which school	

Unknown	

Did you see pupils entering a fast food outlet?
(fast food outlets can either offer hot food, eg chicken wings etc, or cold food, eg sandwiches etc – please record both)

Please add bar of a five bar gate tick for each pupil you see entering a fast food outlet and record the school that they attend

School	Takeaway	Restaurant/ cafe	Newsagent/ Supermarket/ off-license (large or small)	Other Please note what type of food out let
School A (XXX coloured uniform)				
School B (XXX coloured uniform)				
School C (XXXcoloured uniform)				
Other: please write which school				
Unknown				

What numbers of pupils did you see?

School	One	Few (2-4)	Many (5+)
School A (XXX coloured uniform)			
School B (XXX coloured uniform)			
School C (XXX coloured uniform)			
Other: please write which school			
Unknown			

Please list the name and type of fast food outlet which you see in the area that you are observing, both open and closed.
Please also note if the outlet offers a pupil/school special, along with the price.

If you can take photographs, please do this. It would be great to have pictures of each outlet.

Name of fast food outlet	Type of fast food outlet - Takeaway, restaurant, supermarket, other	Does the outlet offer a student / school special? What is the price?

Copies of menus or photographs of menus and special meal offers would also be useful.

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