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A tale of two localities: Healthy eating on a restricted income

S Lloyd[a], J Lawton[b], M Caraher[c], G Singh[d], K Horsley[e] and F Mussa[f]

[a]Nutrition and Well Being, UK
[b]Accessibility Planning & Social Inclusion, Environment Directorate, Lancashire County Council, Preston, UK
[c]Centre for Food Policy, City University, London, UK
[d]NHS Central Lancashire, Leyland, UK
[e]Formerly Central Lancashire PCT, Preston, UK
[f]Healthier Futures

Abstract

Objective. To determine the availability and affordability of a healthy food basket and to model how those on low-incomes might manage.

Design and methodology. After determining access and availability of key items from shops in two localities a healthy food basket was developed. From this a week's healthy menu was devised for a mother and two children, then availability of the ingredients was checked ~~from the~~ data from the shops and costed. The baskets represented the cultural preferences of White British and South Asian families informed by participatory work with both these groups. We chose the income level for a family entitled to income support and child allowance.

Results. Analysis of the availability of some healthy options such as brown bread, wholemeal pasta, and brown rice showed they were not widely available within shops in the two areas. The price of the 'White British' basket in the area of Ingol was £70.61 (lowest price). For comparable goods in the area of Deepdale, using the most expensive shopping basket, the price for the same basket was £42.47. A South Asian family shopping at a major supermarket outlet in Deepdale would pay £47.05. Using local shops they could pay between £38.59 and £44.28 by seeking out the best bargains in five shops (including some top-up items from a national supermarket). At the time of the research a mother with two children entitled to income support and child allowance would have to spend 28–32 per cent of her income in local shops and 34 per cent in a supermarket to buy a basket of healthy goods. This compared to the national average of 10 per cent of income being spent on food purchases.

Conclusions. Prices varied enormously between the two areas. Local shops in one area offered a comparable price to shopping in the supermarkets. The Ingol area was particularly poorly served for those on low incomes and the range of choices restricted. The percentages spent on food to meet the requirements of our healthy baskets and menus show that more than the national average – in both absolute and relative terms – would have to be spent to eat healthily. For the vulnerable and price dependent poor in Preston this will mean having to spend more on food and possibly more on travel to access basics, a healthy diet will cost more, while proportionally an unhealthy diet, as can be found in fast food outlets, may not be as expensive when other costs

Corresponding author:
Martin Caraher, Reader in Food and Health Policy, Centre for Food Policy, City University, London EC1V 0HB, UK.
E-mail: m.caraher@city.ac.uk

such as cooking are taken into account. An overall rise in food prices of 5 per cent will reduce living standards among high-income consumers by approximately 3 per cent; for low-income consumers this reduction in an already poor diet could be as high as 20 per cent. What we have demonstrated is the usefulness of local studies to highlight micro-differences in relatively small areas (Preston city) and the different experiences of groups in accessing healthy foods, and thus the need to refine interventions at a local level.

Keywords

Introduction

Much of the work in the area of food access does not locate the findings in the wider issues of how people live their lives or actual income and cultural capital[1,2]. Normative standards are often used with nutrition represented in the contents of a healthy food basket or using average incomes or incomes of those on benefits to gauge financial adequacy. When a number of different measures are used, as in the Seacroft study in Leeds, problems are identified with accessing a healthy, affordable diet when there may not be observable problems with access[3,4]. Research shows that the poor can and do cope, but have to expend more energy and resources to do so[5]. This paper addresses the question of how easy or not it is to shop in the local area and still access healthy foods at an affordable price.

Dowler[6], points to the fact that there is less research on other features of access, such as money management, and income relative to the basic minimum necessary to purchase a healthy diet. Other, fixed and non-negotiable outgoings such as rent, fuel, and water, can absorb a high proportion of expenses; such costs have risen faster than the retail price index in the UK in recent years, and they differ around the country, unlike income from benefits, pensions, or the minimum wage. The expenditure needs of children, and the cost of food relative to other essentials, can also be very critical in determining purchasing patterns, especially when low household income can fluctuate. The cost of food can also vary between shops (and around the country), even for the same commodities. Thus, people living in different household circumstances may face very different constraints on how much money they can allocate to food, highlighting the need for area based studies. Given all this, food becomes an 'elastic' item in the budget, one you can stretch and cut back on, often with health and nutrition consequences.

The Low Income and Diet and Nutrition Survey (LIDNS, 2007), commissioned by the Food Standards Agency (FSA), albeit with an interesting history of development, first on then off then reinstated after lobbying, concluded that[7]:

> 'In many respects, the areas of concern highlighted in the low income population are similar to those already identified in the general population, although some are more marked in LIDNS.'

For example, for all groups consumption of fruit and vegetables was one-half of the recommended five portions per day; intakes of non-milk extrinsic sugars (particularly among children) and saturated fatty acids were above the (maximum) UK recommendations; all groups showed inadequate nutritional status for iron, folate, and vitamin D; and social factors, such as access to cooking facilities and shops, did not seem to be a limiting factor for food consumption or nutrient intake, although more education was associated with better diets. From all of this the FSA has adopted the view that the low-income population of the UK is not significantly different, in terms of their need to improve their nutritional intake, from the rest of the UK population.

The FSA narrative to the press was that all the population failed to eat adequately[8]. In fact, the detailed findings showed a more complex picture, with the sample exhibiting high levels of obesity and overweight, low exercise, excess calorific intake, and low fruit and vegetable consumption. Far from grounds for complacency – the impression given by the government's media managers –there is much to be troubled by: 39 per cent of LIDNS respondents said they had been worried they would run out of food before more money came in; 36 per cent said they could not afford to eat balanced meals; 22 per cent reported reducing or skipping meals; 5 per cent reported not eating for a whole day because they did not have enough money to buy food. Yet the FSA took the view that 'this study did not identify any direct link between dietary patterns and income, food access or cooking skill' and that the findings from the study will be used 'to help inform their policy making in areas of diet, nutrition and health – in particular those departments with responsibility for lifestyle issues such as smoking and drinking'. Within this perspective food poverty be became a 'lifestyle' issue. If aligned to a perspective that food access is only about individual preferences then, combined, this sees food poverty as an issue requiring health promotion and education as opposed to structural interventions[9].

Methodology

As reported in article 1, we developed a healthy food menu and weekly shopping basket based on eating habits of the communities in two areas of Preston – Deepdale (high South Asian population) and Ingol (largely white and working class). There was a mainstay of 42 food items which were core and common to all baskets. A core food basket was devised to reflect healthy eating options. The starting point for development of the food baskets was analysis and adaptation from food baskets from past work[10–12], and work on nutrient profiling[13]. Additional items were included in the food baskets for the White British (three extra items) and the South Asian food basket (11 items) to reflect cultural and socio-economic preferences. These additions were informed by the participatory group work and referral to experts familiar with the eating habits of the groups. These additional items do not necessarily reflect additional calories in the diet but reflect a wider range of options. We then checked availability of the items in the local shops and from this worked out the cost of a healthy shopping basket in two areas for two ethnic groups (White British and South Asian populations).

From the food baskets a weekly menu was devised, and this ~~incorporated~~ two case studies which looked at shopping patterns and their effect on price within the defined catchment areas. We focused on a White British family and a South Asian family of the Muslim faith, building-in issues of culture and food preference. The weekly menus were designed for a family of a mother aged 30 years with two children aged 8 and 3 years. We assumed the children were at school/crèche and entitled to free school meals and/or a meal at the crèche so there was no need to cook at home for the family in the middle of the day during the week.

From our census of shops we identified what foods were available along with unit costs. In order that we could compare the cost of food baskets that were bought in different areas, when a food was not available from a local shop it was assumed that the food was purchased at a supermarket (we used a Sainsbury's in Deepdale as the comparator), and we used the supermarket prices for gaps in local provision. First we started with healthy menus for both groups for a week; this was checked with participants and professionals in the area and some amendments made on the basis of feedback. From this a detailed breakdown of the menus was undertaken, which was then used to inform the healthy shopping basket necessary for a week (see *Table 1*).

Table 1. Healthy week's menus

White British	South Asian
Breakfast Weetabix or cornflakes with semi-skimmed milk. Eggs and toast at the weekend. Glass of orange juice each day.	**Breakfast** Weetabix or cornflakes with semi-skimmed milk (5). Egg and chapatti at the weekend. Glass of orange juice each day.
Lunch School lunches for the children in school or crèche. Sandwiches for mother in the week. Baked beans on toast on Saturday. Sandwiches on Sunday.	**Lunch** School lunches for the children in school or crèche. Fish curry, lentil dhal with rice for mother (from previous night). Chicken curry, side salad with rice (2) for mother (from previous night). Bhindi curry, channa dahl with rice for mother (from previous night). Bhindi curry, aubergine side dish with chapatti for mother (from previous night). Tuna sandwich (1) for mother. Chicken sandwiches (3). Beans on toast (3).
Evening meal 1. Cottage pie with carrots and frozen peas 2. Roast chicken, potatoes, frozen mixed vegetables and cauliflower 3. Pasta with bolognaise sauce. 4. Cod, parsley sauce, spinach and potato 5. Salmon with pasta salad 6. Tuna salad with potatoes 7. Chicken curry and rice	**Evening meal** 1. Chicken curry, lentil dhal with rice. 2. Chicken curry, aubergine side dish, side salad with chapatti 3. Bhindi curry, channa dalna with rice 4. Bhindi curry, aubergine side dish, side salad with chapatti. 5. Roast chicken, potatoes, frozen mixed vegetables and cauliflower 6. Tuna salad with pasta 7. Fish curry, lentil dhal and rice.
Dessert Low fat yogurt or fruit	**Dessert** Low fat yogurt or fruit
Supper Cornflakes or Weetabix with semi-skimmed milk	**Supper** Not usual to eat supper as evening meal is eaten late – 'Chai time'
Snacks Apple Satsuma Banana Grapes Pear	**Snacks** Apple Orange Satsuma Melon Banana Toast Grapes Pear

Using the healthy week's menu the meals were broken down into their component parts so that the weights of ingredients required to make up the meals could be calculated and used to compile a shopping list for both groups based on a mother with two children. Quantities of food needed to make up recipes were calculated from the recipes; other weights of food portions were based on FSA food portion sizes[14].

Table 2. Number of items available and overall cost

	Ingol – White British basket		Deepdale – South Asian basket		Deepdale – White British basket	
	Supermarket (Booths)	Local shops	Supermarket (Sainsbury's)	Local shops	Supermarket (Sainsbury's)	Local shops
Number of items in basket	42		38		42	
Number of items substituted by items from a local supermarket/shop	0	2	1	7	0	10
Cost of basket with variations depending on where shopped for	£70.61	£70.74–£73.06	£47.05	£38.59–£44.28	£42.16	£38.81–£42.47

Findings

Availability and cost of food basket items in the areas of Deepdale and Ingol

In order to calculate the cost of the food basket we used shops in the two defined areas that could be used by local White British or those from a South Asian background and used ~~as the fallback~~ a ~~supermarket (Sainsbury's)~~ in the Deepdale area.

Analysis of the availability of other healthy options on the '~~eatwell plate~~'[15] showed that brown bread, wholemeal pasta and brown rice were not widely available within shops in the two areas. Interviews with the shopkeepers regarding the provision of healthy foods indicates that the shopkeepers did not fully understand the concept or meaning of healthy options or had a narrow interpretation of the meaning of healthy. This can be seen when set alongside the lack of availability of healthy options such as low fat and wholemeal varieties.

All items in the White British basket for Ingol residents were available from a nearby supermarket (Booths) except wholemeal pasta. However, it was decided to use the Sainsbury's in Deepdale as the standard of comparison for Ingol. This was necessary as the Booths supermarket (within walking distance of some Ingol residents) did not offer an equivalent comparator. Its food offer is targeted at a monied income group and offered regional and high quality goods, but at a price. We include a price for the food basket when bought from Booths in *Table 2* as it has implications for the price of goods in the local area.

For Ingol residents using the local shops, two items from the White British basket were not available at all. It was assumed that these items would be bought from the supermarket. The cost of these items were therefore assumed to be the same as the cost in the Sainsbury's supermarket not the Booths. Two other items were not available: wholemeal pasta and brown rice. These were replaced by white pasta and white rice.

In Deepdale the local shops did not stock 10 items from the White British healthy basket. It was assumed that these items would be bought from the supermarket and we applied the supermarket cost to the items in the table. Two other items were not available from local shops: wholemeal pasta and brown rice; these were replaced by white pasta and white rice. Again the replacement does not have an impact on the eatwell balance but it does have an impact on the overall healthy nature of the diet.

The majority of the items in the South Asian basket were available from the Sainsbury's supermarket in Deepdale; the exception was wholemeal chapatti flour. It was assumed that the wholemeal chapatti flour would be purchased at a local shop. The South Asian family would be able to eat a balanced diet in line with the ~~eatwell~~ plate if they shopped at the local supermarket and one local shop. Seven items were not available from the South Asian basket from local shops in Deepdale. It was assumed that these items would be bought from the local Sainsbury's supermarket and the South Asian family could eat a balanced diet in line with the ~~eatwell~~ plate. *Table 2* summarizes the results of the shopping in terms of what was available and not available.

The key distinguishing feature in the above is the high price for the White British basket in Ingol. The price of shopping locally with some top-up from a supermarket (outside the Ingol ward, which was cheaper than the local Booths) for items not available in the local shop would be £28 more for a weekly shop for residents of Ingol. The price differential amounts to £112/month. In Deepdale shopping locally (with supermarket top-up) for the healthy White British food basket could range from a small saving of £3.35 to a £0.31 surplus on the Sainsbury's supermarket spend. All this assumes the ability and time to shop around and does not address issues of micro access or transport home. Nonetheless in Deepdale local shops can be seen to be competitive with supermarket prices if not in the range of goods available and in any one shop; in order to get best value five shops would need to be visited, with some top-up from a supermarket. For a South Asian family shopping in Deepdale the picture is that the price of goods from local shops is lower (ranging from £38.59 to £44.28) than at a supermarket (£47.05).

All of the above is comparing costs across supermarkets and local shops; the real test of affordability comes in relating the costs to incomes and we have attempted this in the next section by developing case studies. At the time of the research a mother with two children in receipt of income support and child allowance (exclusive of housing costs) for the two children was entitled to £138.00 per week (£57.45 for the adult, £40–42 per child)[16].

Percentage of income spent to attain a healthy food basket

Table 3 shows the percentages spent on food to meet the requirements of our healthy baskets and menus. For all the groups this is higher than the average ~~12–15~~ per cent of income spent by the average English family on food for the home and probably higher than the existing food spend of many families. In reality unhealthy options are cheaper and we were not shopping for a typical basket but for healthy options. For the case studies, the menus and subsequent shopping, we assumed the ability to cook, store, and prepare food. While our shopping basket is a healthy one, it is in no way extravagant and assumes children at school/crèche receiving a free midday meal and the use of leftovers in home cooking. Holiday times introduce an additional burden when feeding children and along with the high cost of care and entertainment can become problematic for those on low incomes. We know that food is an 'elastic' item in the budget and it is this that is likely to be stretched to make monies available for other activities, often resulting in a marked deterioration in food quality.

A South Asian family (assuming a mother with two dependent children, on income support) shopping at a national chain supermarket in Deepdale would pay £46.49 for a healthy shopping basket; one item would be missing from the basket, which they would need to buy elsewhere. However, if they chose to shop in local shops they could pay less for their healthy shopping basket, they would still be missing seven items from their shopping basket, and would need to buy these items elsewhere, costing in total £38.59–£44.28. In order to get best value they would need to shop at four shops. Having shopped at these four shops they could complete the food basket.

Table 3. Percentage of household expenditure on healthy food basket *vis a vis* income support based on a mother with two children

Type of basket	Where bought	Amount spent	Percentage of income support	Average spend – percentage of income
White British basket, Ingol	Booths supermarket	£71.47	52	12–15
	Out of area supermarket	£42.16	31	
	Local shops (with top up of 2 items from supermarket)	£70.74– £73.06	51–53	
White British basket, Deepdale	Local Sainsbury's	£42.16	31	12–15
	Local shops (with top up of 11 items from supermarket)	£38.81–£42.47.	28–31	
South Asian basket, Deepdale	Local Sainsbury's supermarket, missing one item	£46.49	34	12–15
	Local Sainsbury's supermarket + item bought from local shop	£47.05	34	
	Local shops (with top up of 7 items from the supermarket)	£38.59–£44.28	28–32	

Conclusions

As noted above, at the time of the research a mother with two children, in receipt of income support and child allowance for two children, was entitled to £138.00 per week. The Joseph Rowntree report on income levels proposes that the minimum income standard, in terms of need, for a family of two on benefits is £337 without childcare costs and £524 with. This was achieved by asking people what the norms should be and it was clear from the work that benefit levels, however set, underestimate the requirements for living[17]. The percentages spent on food to meet the requirements of our healthy baskets and menus show that they would have to spend more than the national average – in both absolute and relative terms – to eat healthily. ~~This percentage appears equivalent to~~ the findings from other research such as that by Morris and colleagues and points to the fact that it is cheaper to eat unhealthily[18,19]. Our research and costings pre-date the rise in food prices that have occurred in the year and are continuing into 2008. ~~The total impact of world food prices is yet to be seen and not all consumers are equally vulnerable.~~ For the vulnerable and price dependent poor in Preston this will mean having to spend more on food and possibly more on travel to access basics. A healthy diet will cost more, while proportionally an unhealthy diet, as can be found in fast food outlets, may not be as expensive when other costs such as cooking are taken into account. A rise in food prices of 5 per cent will reduce living standards among high-income consumers by approximately 3 per cent, for low-income consumers this reduction in an already poor diet could be as high as 20 per cent. This does not take account of other factors such as increases in fuel and/or transport costs.

The FSA LIDNS report on food and low income highlighted the finding that nutritional intakes of all income groups are below recommended levels and gaps between those on low-incomes and other groups remain[7]. Others show that these gaps are increasing. This, at worst, highlights the

need for a universalist approach to healthy eating with all groups targeted, regardless of income. The danger with such an approach is that it widens the inequality as those groups who are more affluent can act and can afford to adopt their lifestyles. A selectivist approach runs the danger of stigmatizing groups targeted and of the inequality gap increasing as the poor still lack the resources (social and financial) to act on the issues. Perhaps the best approach is to combine both approaches with a whole population or universalist approach being supplemented by a targeted or selectivist approach to ensure that inequalities do not widen.

The issue of shopping locally raises many issues. From the above findings it is possible in one area to shop using local shops and with some top-up shopping have a healthy affordable range of foods, while in the other area (Ingol) it is more difficult with food prices locally being considerably higher. There is an argument that people do travel to shop and the location of a supermarket a car ride away is not an unreasonable scenario. Indeed in ~~the current research the~~ group in Ingol indicated that this is what they had done – travelled to the nearby ~~Asda~~ supermarket. This introduces a quandary, which the present research is unable to untangle, of cause and effect. Is there a dearth of local shops and are prices high because people travel outside the area for their shopping or because there are few local shops characterized by high prices? What we can say is that those who choose to do their shopping locally in Ingol will pay more and have less choice of local shops. There are also groups who may have to shop locally and who will suffer from the same high prices and lack of choice. These include those with access to a car, single mothers, those with disabilities, and the elderly.

The FSA report on the diets of low income groups paints a picture that is far from ideal, and our findings in a local area add to this picture by outlining what it is like to live in a low income area and the experience of shopping for culturally appropriate healthy food options[7]. In addition our findings caution against using just fruit and vegetables, as other studies have done, as the sole means of measuring proxy access and availability to a healthy diet. Our results show that other items on the ~~eat-well~~ plate need to be considered. All of the above needs to be set alongside policies which support/control shops (or takeaways) in existing areas of deprivation and not simply 'bus' people to areas where there are concentrations of food shops, such as a free bus to a major supermarket. What we have also shown is the advantage of local studies to highlight micro-differences in relatively small areas (Preston city) and different experiences of groups in accessing healthy foods.

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