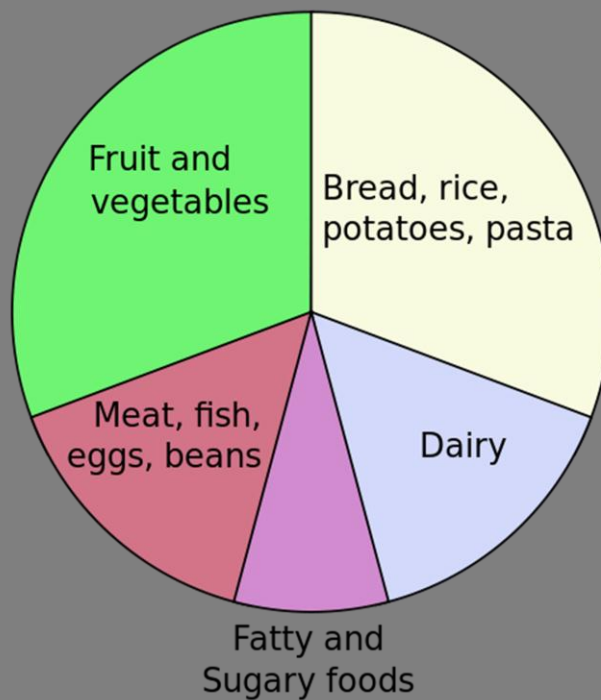


2013

Food Poverty



What Does The Evidence Tell Us?



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This report has been produced by Bristol City Council for Bristol's Food Policy Council.

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Contents

Executive Summary	1
Background	2
1. Understanding Food Poverty: What is “food poverty”?	3
2. What are the key causes of food poverty?	4
2.1 Financial	5
2.2 Social and physical	7
3. The scale of food poverty: Who is at risk?	9
3.1. Traveller community	9
3.2. Children	9
3.3 Older people	9
3.4 People who are homeless	10
3.5 Asylum seekers and refugees	10
4. The scale of food poverty: How can food poverty be “measured” in Bristol?	10
4.1. Income-related indicators	11
4.1.1 Income deprivation	11
4.1.2 Numbers receiving state benefits	11
4.2 Fruit and vegetable consumption	12
4.3. Use of emergency support	12
4.4 Free school meal uptake	14
4.5. School feeding programmes and Breakfast Club activity	14
4.6 Measuring food poverty	15
5. The impact of food poverty on individuals	15
6. References	17
7. Glossary	20
8. Note on method for the evidence review	20
Appendix	

<http://bristolfoodpolicycouncil.org/publications/>

Executive Summary

1. This review looks at best available evidence relating to food poverty, what it is, what its scale is likely to be in Bristol, and what impact it has. The aim is to provide sound evidence for the Welfare Reform Board, the Food Policy Council and others, in order to inform policy recommendations.
2. Food poverty is the inability to afford, or to have access to, food to make up a healthy diet. It is about the quality of food as well as quantity. It is not just about hunger, but also about being appropriately nourished to attain and maintain health.
3. The causes of food poverty are complex and multiple and include the following factors;
 - financial – relating to income and to the price of locally available healthy food
 - social – relating to cultural norms, skills, social networks, and the impact of marketing of unhealthy foods
 - physical – relating to access to shops and cafes selling affordable healthy food, to cooking facilities, to transport.
4. This evidence review concludes that there is inescapable evidence that for many people, including families with children, there is a gap between available income and the actual cost of securing a nutritious diet.
5. The Minimum Income Research Programme, funded by the Joseph Rowntree Foundation, identified that the income necessary for an acceptable standard of living in the UK in 2012 as judged by panels of ordinary people, was £16,400 pre-tax per year for a single person and £18,400 pre-tax per year each for 2 parents with 2 children.
6. The UK Low Income Diet and Nutrition Survey commissioned by the Food Standards Agency reveals that low income households have diets that are deficient in fresh fruit and vegetables, deficient in iron folate and vitamin D and high in sugar and saturated fats. Over a third of the low income families reported that they could not afford balanced meals.
7. The Defra Family Food Survey found clear evidence that affordability of a nutritious diet has worsened between 2007 and 2011. Poorer households spend proportionately more of their income on food, and are choosing highly processed and high fat foods of poor nutritional quality in order to save money.
8. Prices charged for healthy food are higher in small convenience shops compared with in large supermarkets. People on low incomes, the elderly, and other vulnerable groups like travellers, homeless, asylum seekers and some black and minority ethnic groups may be more likely to be reliant on small local shops where choice and affordability is limited.
9. In Bristol there are 22,145 children living in poverty according to the most up to date figures from the Department for Work and Pensions 24% of Bristol schoolchildren are claiming free school meals.
10. Numbers of people using emergency support (food banks) in Bristol rose from around 2,600 in 2011/12 to at least 7,600 people in 2012/13, and may rise to 13,000 people in 2013/14.

Food Poverty

What Does The Evidence Tell Us?



This review investigates what is meant by food poverty, what causes it, what its scale is likely to be in Bristol and what its impact might be on the people in this city.

Background

There are several definitions of food poverty, but what they all have in common is that if people

- have a poor quality diet
- do not have the resources or access to sufficient and/or appropriately nutritious food necessary for a healthy life

then they are experiencing food poverty.

Food poverty involves both **poverty** and involves **healthy food**.

The purpose of this review is to inform the Welfare Reform Board, the Food Policy Council, and other stakeholders to enable them to underpin their work with best available evidence. If required, a second review could be done to look at what the available evidence tells us about ways to tackle food poverty.

The aim is to provide a rationale and an evidence-base to inform the policy recommendations to be made by the Mayor, Bristol City Council and its partners in order to support people affected by food poverty in Bristol and to address the risk factors of food poverty in this city.

Food poverty is the inability to afford, or to have access to, food to make up a healthy diet. It is about the **quality** of food as well as quantity.

1. What is “Food Poverty”?

The Department of Health's definition of food poverty typifies the link between poverty and healthy food:

Food poverty is “*the inability to afford, or to have access to, food to make up a healthy diet.*”⁴

Key Message:

Food poverty is about quality of food as well as quantity – it is not just about hunger, but also about being appropriately nourished to attain and maintain health.

Poverty: Is about having adequate resources, financial physical and social, to enable a standard of living acceptable within the society in which you live¹.

Healthy food: means having a wholesome, balanced and nutritious diet. According to the World Health Organisation and the NHS this means:

- eating the right amount of food for how active you are
- eating a range of foods including
 - plenty of fruit and vegetables
 - starchy foods such as bread, rice, potatoes, pasta and other starchy foods (choosing wholegrain varieties when possible)
 - some milk and dairy foods
 - some meat, fish, eggs, beans and other non-dairy sources of protein
 - but restricting sugary and fatty foods.

This balanced diet will ensure an intake of the right nutrients to maintain good health^{2,3}.

Food poverty has been debated for several decades and how we understand the concept has grown and evolved over time. Recently definitions have also included reference to accessing food according to social norms and cultural practices.

Rising food prices in 2007-8 brought the realisation that the UK did not have the capacity to adapt to food shortages, something which could impact on population health. In more recent years, references to food poverty have increasingly included the concept of food (in)security, often as a synonym to food poverty, particularly at a household level. Further detail is included in the Appendix document available at the [Bristol Food Policy Council](#) website.

Key themes emerging from definitions and discussions around food poverty or food security

Availability	<ul style="list-style-type: none">• Is there sufficient food?• Can we depend on supplies?• Where does our food come from?
Access	<ul style="list-style-type: none">• Can everyone in our population obtain food?• Do they have skills and facilities to make best use of available food?
Affordability	<ul style="list-style-type: none">• Can low-income individuals and families afford to buy healthy food?
Nutrition and quality	<ul style="list-style-type: none">• Do people consume the right type of food, in the right quantities, for their physical needs?
Sustainability	<ul style="list-style-type: none">• Can we rely on continued access to food?• Will everyone always be able to afford food?

Conclusion:

Food poverty is complex and multi-faceted. It is not simply about immediate hunger and how that might be alleviated. It is not just about the quantity of food that is eaten, but involves the dietary choices, the cultural norms and the physical and financial resources that affect which foods are eaten, ultimately impacting on health status.

What we choose to eat is a product of our financial circumstances, our social networks, our personal and cultural beliefs, our environment and our lifestyle behaviours⁵.

These factors can be broadly categorised as:

- financial
- social (including educational/skill-based/informational barriers)
- physical – both in terms of the individual and the environment.

2. What are the key causes of food poverty?

Key Message:

Lack of access to the necessary finance, coupled with inadequate physical resources (e.g. cooking facilities, local food shops, access to transport) and inadequate skills and social networks are central to creating food poverty.

2.1 Financial causes

A less healthy diet is strongly associated with lower income. Diets become progressively more unbalanced with decreasing socio-economic status^{6 7}.

The Eatwell Plate shows the types and proportions of foods that should be eaten to make a well-balanced, healthy diet. Latest data show that the lowest income households spent 32% of their food budget,

£5.70 per person per week, on meat, fish, eggs, beans and other non-dairy sources of protein. They spent 22% on food and drinks high in fat and/or sugar⁸. Low income families have competing demands on their budgets and fixed and non-negotiable outgoings such as rent, fuel, and water have to be prioritised, leaving less left in the pot for food⁹. Without sufficient money, people are more likely to consume inadequate and inappropriate diets¹⁰ (figure 1).

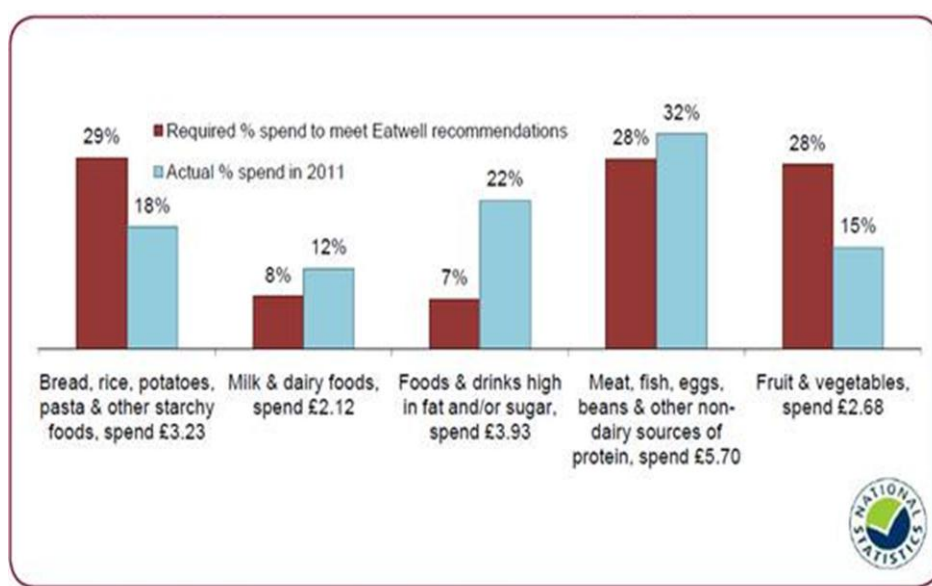
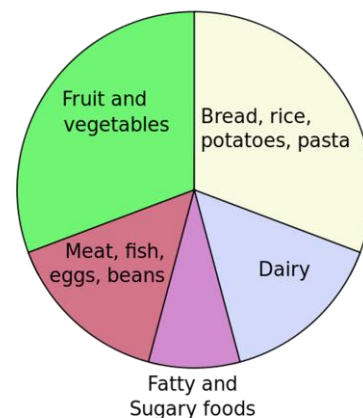


Figure 1:
Percentages of food budget spent on Eatwell Plate categories by low income households in the UK

How much money is “enough”?

The Minimum Income Standard (MIS) research programme identifies what level of income is needed to allow a minimum acceptable standard of living in the UK today. It is funded by the Joseph Rowntree Foundation, is based at Loughborough University and has input from other respected UK academic institutions. It combines data from research evidence, expert judgements and panels of ordinary people. The data enable a relatively objective view of what society thinks is essential for a decent standard of living and what it costs to achieve such a standard, taking tax and benefit changes into account^{11 12}. More details from the MIS Programme can be found in the Appendix to this report.

Key Message:

A minimum acceptable standard of living in the UK in 2012 requires:

- £16,400 pre-tax income per year for a single person
- £18,400 pre-tax income per year each for 2 parents with 2 children.

1. UK Low Income Diet and Nutrition Survey (LIDNS)^{13 14}.

This survey, commissioned by the Food Standards Agency and conducted by University College London, Kings London and NatCen, involved a nationally representative sample of low income households. The findings show evidence of poor diet and poor nutrition with people on low incomes more likely to have:

- lower than recommended consumption of fruit and vegetables
- higher than recommended consumption of sugar and saturated fatty acids
- low intakes of dietary fibre and "roughage"
- diets poor in iron, folate and vitamin D
- higher prevalence of overweight and obesity
- importantly for Bristol, those living in urban areas and those living in the most deprived areas tended to consume less food and have lower nutrient intakes compared with those in suburban and rural areas.

Food security was an issue:

- 39% said they sometimes worried about running out of food because of money
- 36% said they could not afford balanced meals
- 22% reported skipping meals
- 5% reported sometimes not eating for whole day because of money.

So – how do we know that a low-income impacts on food choices and helps cause food poverty?

More details from these surveys can be found in the Appendix.

2. Defra (Department for Environment, Food and Rural Affairs) Family Food Survey¹⁵

- Between 2007 and 2011, food prices increased 12% in real terms.
- Weekly spending per person on all household food in 2011 was £27.99, an increase of 1.5% on the previous year. But because of price rises, that bought less food - 4.2% less in 2011 compared with 2007.
- The poorest are hit hardest by price rises. £1 in every £6 of household expenditure for the poorest 20% went on food, compared with £1 in £9 for all UK households.
- In low-income households the proportion of spend going on food rose from 15.2 to 16.6% - whereas in the average household, 10.5% of household spend went on food in 2007 rising to 11.3% in 2011.
- By 2011 all households were buying 10% less fruit and vegetables on average.
- BUT: households in the poorest 10% of households were buying 15% less fruit and vegetables, and households in the next poorest 10% were buying 22% less. And these were the households less likely to buy fruit and vegetables to begin with.
- The poorest 10% consumed an average of 107g of fruit per day, equivalent to only just over one portion. By comparison, the highest-earning 10% consumed 227g per day.
- In order to save money, UK households have bought less of the more healthy types of food – and have bought more of the nutritionally poor, processed food and fatty food.
- Energy intake from sugar ('non-milk extrinsic sugar') is greatest the poorer you are.

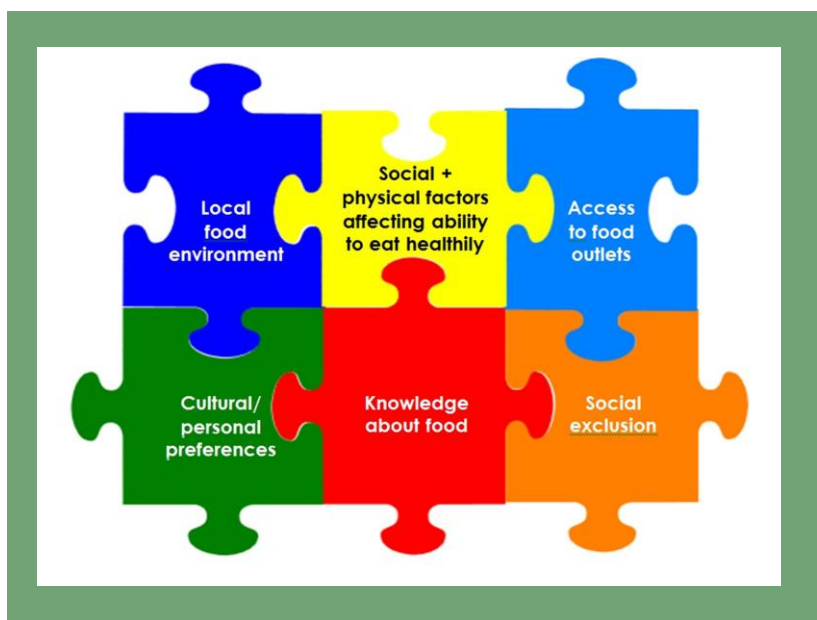
Food and income facts:

- Foods rich in nutrients cost more per calorie than foods that are high in calories but low in nutritional value.
- The relative price of healthy foods (like fruit and vegetables) have increased more over time than prices for unhealthy processed foods and foods with added sugars and fats¹⁶.
- In a Midlands city, food items bought from local shops were more expensive than the same foods from a supermarket and trying to buy healthy foods locally was even more expensive¹⁷.
- The recession has seen real household incomes fall; they are now at their lowest level since the second quarter of 2005. However the cost of food has continued to rise – food price inflation has outstripped general inflation for a decade¹⁸.

2.2 Social and physical causes

There are inter-relating **physical** and **social** factors impacting on food choices. Some that have been suggested by research include:

- physical distance to a supermarket selling healthy food more cheaply than in local shops
- balance locally between fast-food outlets and fresh fruit and vegetable retailers
- level of education
- cooking facilities and skills.



Cultural norms, knowledge and skills, social networks, and the impact of marketing of unhealthy foods as well as transport and access to shops that sell affordable, healthy food, availability of the facilities to cook it - all these inter-related factors combine to promote food poverty.

Physical

Research shows that, in general:

- Areas with high proportions of BME residents and/or low-income families are likely to have fewer supermarkets and more convenience stores and fast-food outlets¹⁹.
- There are high numbers of fast food outlets in areas of high deprivation and fast food chains are concentrated in more deprived areas of England and Scotland^{20 21 22}.
- Associations between proximity to fast food and actual consumption and/or body mass index (BMI) are less clear BUT
- people living in areas with shops selling a wider variety of produce tend to eat more fruit and vegetables than those living in areas with shops selling fewer varieties of produce²³.

Additionally, more specifically:

- Studies in Cardiff and Leeds found that easy access to a newly-built supermarket selling a range of competitively priced nutritious food was associated with improved diets^{24 25}.
- In Newcastle upon Tyne, those reliant on walking to shops are likely to have lower quality diets²⁶.
- People who need to use a bus to get to shops selling cheaper but healthier foods are likely to have lower quality diets. This is because the high costs of bus fares plus logistics of juggling overcrowded buses, shopping and pushchairs mean that people are more likely to shop locally in shops with poorer quality food²⁷.

Social

Research shows that, in general:

- There is a link between level of education and poor dietary habits. Even after taking social class out of the equation, level of education can predict quality of diet⁵.
- "Low educational achievement" is a risk factor for eating less fruit and vegetables²⁸ and lower nutrient intake¹³.
- People with no educational qualifications tend to eat unbalanced diets²⁹.
- People from disadvantaged backgrounds tend to have poor cooking facilities and poor cooking skills; confidence in the ability to cook is greater in people from higher social class backgrounds^{30 31}.
- Marketing has a strong influence on food choices; there is widespread advertising of unhealthy food coupled with insufficient and inadequate nutritional information³².
- Social exclusion, which arises as a result of unemployment, discrimination, poor skills, low incomes, poor housing, high crime, bad health and family breakdown can result in food poverty. The key drivers of social exclusion and food poverty are similar; poverty and deprivation contribute synergistically to food poverty³³. Living alone is a risk factor for food poverty³⁴.

Conclusion:

A wide range of factors affect access to nutritious food. Diet and health is affected by, not just income, not just distance to fresh fruit and vegetable shops, but also the ability and affordability of travel to these shops, as well as the willingness and ability of individuals to choose and prepare such healthy foods. People's prior knowledge of healthy foods, along with a wide range of family and economic circumstances from living alone to the level of their qualifications, as well as their employment status, are all factors that influence diet and health³⁵.

In the UK a significant proportion of the population do not have access to nutritionally adequate food.

Around four million people in the UK cannot afford to eat a healthy diet.

Joseph Rowntree Foundation, 2000.

3. The scale of food poverty: Who is at risk?

Research on food poverty and food security tends to focus on young and middle-aged adults and on households with children. Food poverty among other types of individuals and households including the elderly, unemployed, and those with disabilities remains less well researched and understood but it should not be underestimated.

Traveller community

- Low-income, nomadic lifestyle and inadequate cooking and storage facilities all impact on diet choices.
- There is increased salt and fried food consumption in this population and travellers themselves report that inadequate refrigeration facilities may contribute to lack of planning of meals³⁶.

Children

In the UK, 1 in 20 children live in a food insecure household³⁷.

- Food poverty is more common in families where the mothers were younger, smokers, of lower social class, in receipt of financial benefits and who had a higher deprivation score.
- Those in food poverty were likely to have a diet of poorer quality, with greater intakes of energy-dense, micronutrient-poor foods and eat more white bread, processed meat and chips, and fewer vegetables than children not in food poverty.
- In the South West, loss of free schools meals during the school holidays means that parents must find extra money to feed their children which markedly increases food poverty at these times of the year³⁸.

Older people

- Older people (defined as those aged 65 years and over) are more likely to experience food poverty.
- An older person, living alone, who has decreased mobility, has problems with transport to shops selling healthy affordable food and who has problems cooking for themselves is at risk of a poor quality diet.
- Older people can lose interest in food due to bereavement, depression and ill health³⁹.
- Data shows that the most at risk are those in low-income households, the oldest-old, those from some BME groups, those with a disability and men living alone⁴⁰. Single men may be at particular risk, especially those aged 80 plus. Older people who live on their own often report that it is not worth cooking for just one person⁴¹.

Who are the vulnerable groups?

People who are homeless

- Those living in B&Bs, those sleeping in hostels or night shelters and those sleeping rough eat fewer meals per day, lack food more often and are more likely to have inadequate diets and poorer nutritional status than housed populations⁴².
- Lack of access to cooking and food storage facilities means reliance on voluntary sector amenities e.g. shelters and day centres. Research indicates that this food often lacks variety, is high in saturated fat and cholesterol and low in nutrient density⁴³.

Asylum seekers and refugees

- This population is at increased risk through unemployment, exclusion from social networks, low-income, weakened family networks and little personal control over their future.
- Such individuals have poor access to kitchen facilities and cannot afford to supplement food provided in hostels. Evidence has been found of malnourishment, ill health related to poor diet in babies and weight loss in children^{44 45}.
- These individuals have little or no say in their own or their children's food choices and are often faced with a monotonous diet.
- There may be issues related to the choice of foods appropriate to their culture: 97% of people in a Somali population ate less than 2 pieces of fruit, and 92% less than 2 portions of vegetables a day, with rice, pasta and red meat constituting the bulk of the diet⁴⁶.

Key Message:

Those most at risk are those with limited household resources, low disposable income and poor socioeconomic status. Single parent families especially those with young children, some BME communities, refugees, travellers, unemployed people, and those with chronic illness or disability are more likely to be food insecure.

4. The scale of food poverty: Can we measure how many Bristol residents are in food poverty?

There is no single method for accurately measuring the extent of food poverty in a population. Instead surrogate measures – or “indicators” – are used. In this section we have summarised available income-related and other indicators, including numbers receiving state benefits; income deprivation; proportion of residents eating fruit and vegetables; use of emergency

support; free school meal uptake and breakfast club activity. The term ‘food desert’ was first used in Scotland in the mid-1990s to describe dense urban areas where residents did not have access to an affordable and healthy diet and where fast food restaurants and convenience stores dominated⁴⁷.

However there is currently debate over the concept of food deserts – do they exist, what their precise impact is and whether it is possible to identify them. It is generally believed that food deserts arise primarily from poverty rather than from retail geography. Taking all these factors into account, there are some toolkits available which aim to assess the level of food poverty within an area. See section 4.6 and the Appendix for more details about these indicators and toolkits.

4.1 Income-related indicators

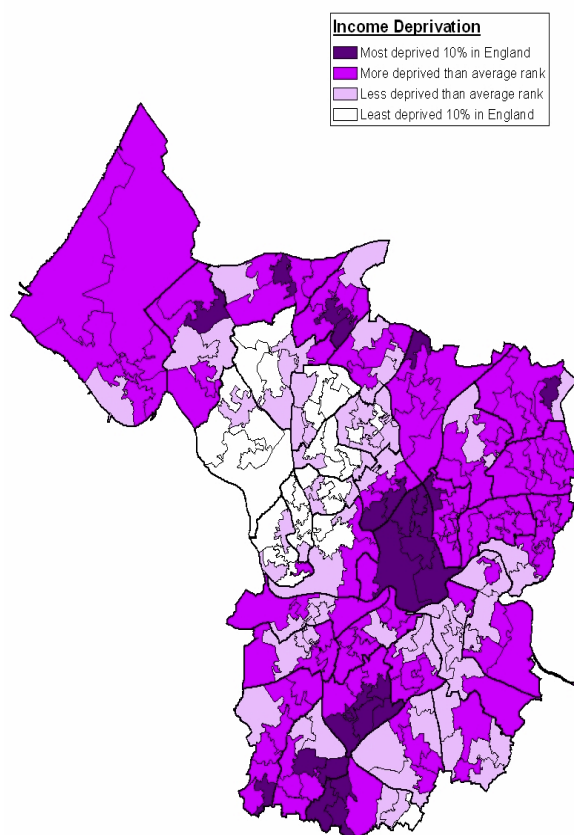
4.1.1 Income Deprivation

- In Bristol as a whole 69,500 - 16% of the population - suffer from income deprivation, with local LSOA (see glossary) levels ranging from 51% to 1%.
- There are 26 LSOAs in the most income deprived 10% nationally (11 are in South Bristol, 8 are in the central area and 7 in north and east Bristol).
- There are 22 LSOAs where more than a third of all people live in income deprivation.
- On a ward basis, more than a third of people are income deprived in Lawrence Hill (36%) and Filwood (35%), where most LSOAs in these wards fall within the most deprived 10% of areas in England (figure 2).

4.1.2 Numbers receiving state benefits

The latest full national data release, for 2010, shows that 22,145 Bristol children live in poverty (25.6%) Numbers of children living in households receiving "Out of work benefits" (OOWBs) is an alternative measure of child poverty. There are 19,510 children under 16 (and 21,720 under 18) in Bristol living in households receiving OOWBs. As a proportion of the rising child population in Bristol this figure has been falling recently (figure 3), but due to population growth, the actual number of children in such households has declined only slightly (e.g. from 19,980 in 2009 to 19,510 in 2011).

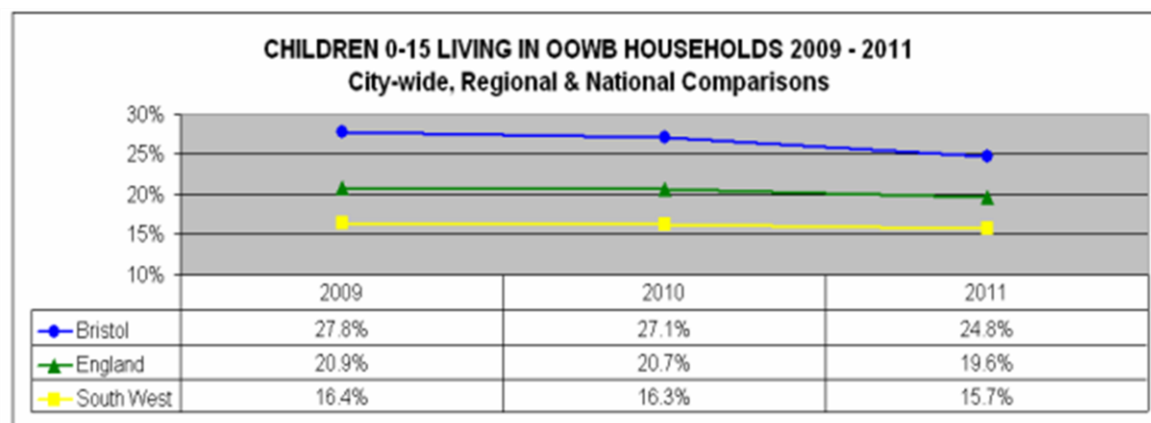
Figure 2: Income deprivation in Bristol



Source: DCLG English Indices of Deprivation 2010
Map: ONS Super Output Area boundaries © Crown Copyright and database right 2011, Ordnance Survey 100023496

Figure 3: Children living in OOWB households

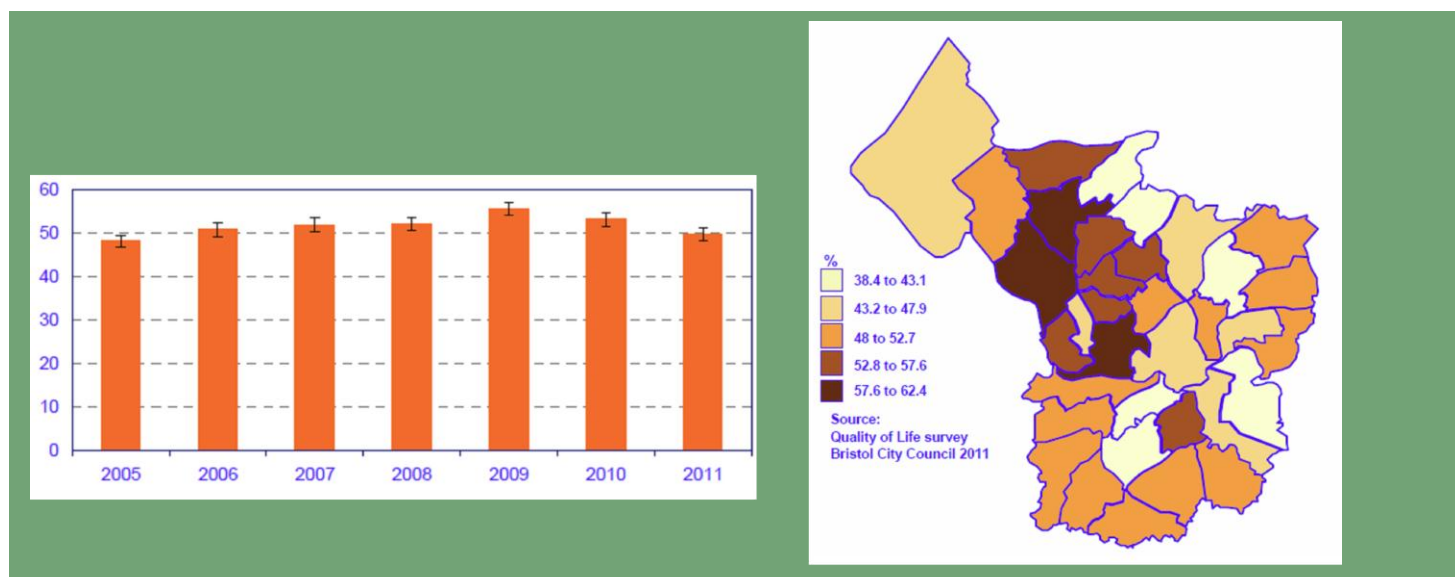
Source: Dept for Work and Pensions (DWP); via Child Poverty: A Bristol Picture, Jan 2013.



4.2 Fruit and vegetable consumption

In some city areas only 38 – 43% of residents say that they eat the recommended levels of fruit and vegetables.

Figure 4: Proportion of residents who report eating 5 or more portions of fruit and vegetables each day



According to the annual Bristol Quality of Life survey in 2011⁴⁸, 50% of responding residents said that they ate 5 or more portions of fruit and vegetables a day. This level has fallen in the last two years and is now closer to the level measured in 2005 (48%). Figure 4 shows recent trends and also shows the areas of the city where only 38 – 43% of residents say that they eat the recommended levels of fruit and vegetables.



4.3 Use of emergency support

A report published in May 2013 from Church Action Poverty and Oxfam claims that the numbers of people thought to be in need of food aid to help them eat — in the form of food parcels and food banks which aim to provide relatively short-term relief for the 'symptoms' of food insecurity and poverty to people in crisis - have been previously underestimated and is over 500,000 across the UK⁴⁹.

The first food bank in the Bristol area was established in March 2011. By July 2013 there were at least 11 "Foodbanks" or "Foodstores". However, there

are major areas of the city that do not have provision and several food banks are relatively new, and are still building their capacity, effectiveness and reach. Currently there are 3 main organisations providing this support to the people of Bristol (data below relate to July 2013). However there are also other locally-run independent food banks operating in the city e.g. Victoria Park Baptist Church food bank.

- FareShare South West which works to reduce food waste and re-distribute this to people in need. Currently FareShare South West distributes food each week to

over 100 charities working with marginalised and disadvantaged people in and around Bristol.

- Trussell Trust (TT) which operates the UK's largest network of food banks ("Foodbanks"). Around 450 people per month are supported by them from 7 locations in North and East Bristol, around 47% of whom are children.
- Matthew Tree Project (TMTP), a local organisation, has operated a range of actions since 2011 including distribution from four food hubs (FoodStores") in Central and South Bristol, feeding and

supporting around 700 people per month.

Locations of TT and TMTP outlets are shown in figure 5. The map does not include other food banks.

Recent figures show that people in Bristol are making greater use of emergency support from food banks (figure 6). Available data show a rapid increase in the last 2 years (as would be expected with the expansion in locations). Whilst this is a reflection of the support being delivered, not necessarily the extent of the underlying need, it does give us a clear indication of the increase. In 2011/12 there were at least 2,600 people supported, which

rose to at least 7,600 people in 2012/13, and figures for the first quarter of 2013/14 indicate that the current year could see as many as 13,000 people supported by food banks in the Bristol area (also shown in figure 6).

Main reasons given for referral to food banks are low income, benefit changes and benefit delays. Other reasons include debt, delayed wages, domestic violence, homelessness, sickness and unemployment.

One limitation of using food bank activity data as a surrogate for numbers experiencing food poverty is that it cannot capture those who are in crisis but before they have resorted to using them. More information can be found in the Appendix. Data will continue to be reported through Bristol's JSNA process.

Figure 5: Location of Food Banks across Bristol

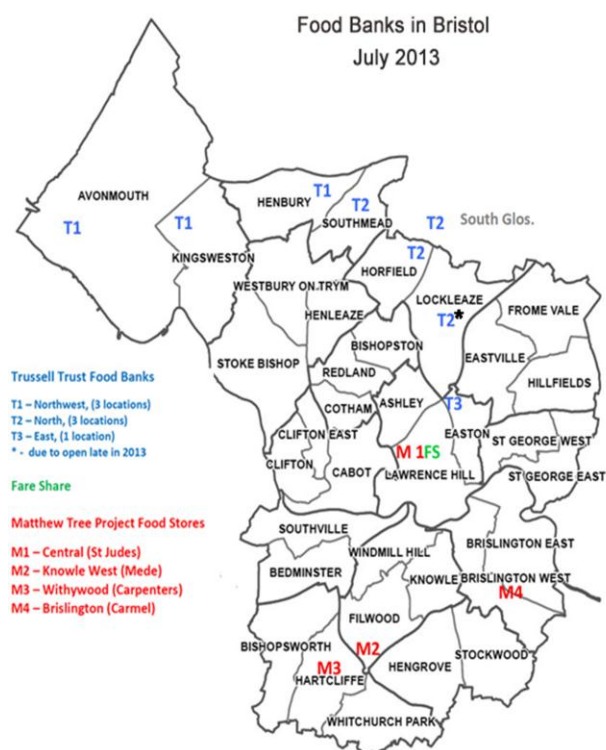
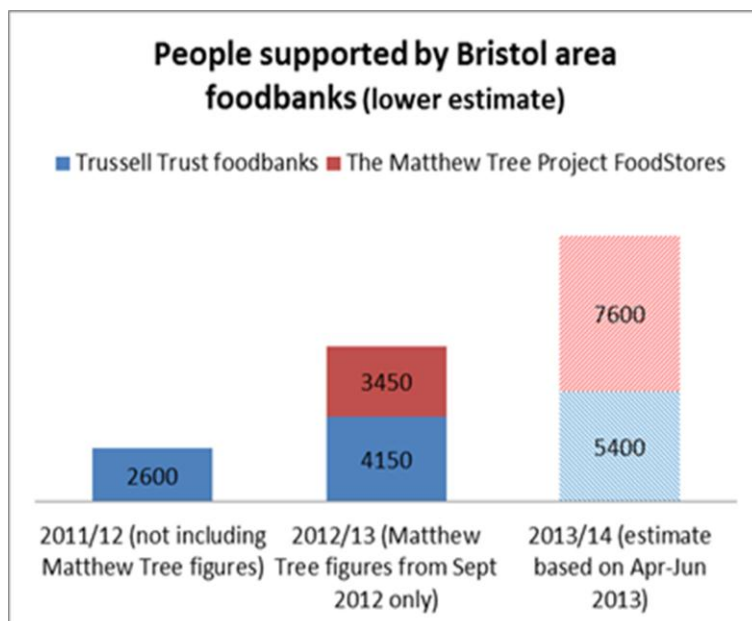


Figure 6: Numbers of people using food banks locally



4.4 Free school meal uptake

Another indication of food poverty is registration for free school meals (FSM). Latest figures (December 2011) from the Department of Education show that in Bristol 13,300 pupils out of 48,900 enrolled (27%) were entitled to FSM and 11,500 pupils (24%) were claiming.

- The highest level of FSM children on the school roll are those in Lawrence Hill ward where 47% of pupils are eligible.
- 10 wards have between 30% and 39% FSM eligible children - these 10 wards are distributed across the city.
- There are a further 10 wards with between 20% and 29% - again distributed across the city.
- In terms of the remaining 14 wards with relatively low (below 20%) of FSM eligible children, the majority (9) are in the North, 4 in the South and 1 in the East.

4.5 School feeding programmes and Breakfast Club activity

There is evidence that food insecure children are more likely to miss meals⁵⁰ and that school feeding programmes may have some impact for the most deprived children in alleviating short-term hunger, improving nutrition and educational attainment of children and in transfer of income to families⁵¹.

A survey of questions to 500 teachers by 'Opinion Matters' and funded by Kellogg's⁵² found that in England:

- 80% of teachers reported having seen examples of pupils starting school without having eaten any breakfast.
- Nearly 33% of teachers reported having brought in their own food to feed pupils.
- About one in six primary teachers reported spending £24.99 per month of their own money on food for their pupils.

Key Message:

16% of our population (69,500) have income deprivation.

26% of our children (22,145) are living in poverty.

24% of our children are claiming free school meals.

Increasing numbers of people are accessing food donations from food charities.

In September 2012, teachers at Knowle DGE School, Bristol took over the funding of breakfasts for 130 pupils after the charity Global Hearts for Children which had funded the meals went into liquidation.

4.6 Measuring food poverty

There are toolkits available to assess food poverty in an area. Typically these toolkits take into consideration a range of socio-economic and demographic factors and require access to various datasets and GIS mapping software. Examples include:

- The Food Access Radar toolkit; developed by Staffordshire County Council and Oxfordshire County Council on behalf of the Food Standards Agency and the National

Consumer Council to provide a standard approach for local authorities to inform local accessibility planning processes.

- The Food Mapping Toolkit; developed by the Centre for Food Policy, City University, London following work in Hackney examining accessibility to healthy food. The aim is to act as a guide to assist in mapping a chosen area to identify and show its provision of healthy food.

- Reaching the Parts: Community Mapping Toolkit; produced by Sustain in collaboration with the Oxfam UK Poverty Programme. It aims to reveal a clearer understanding of how food poverty affects people in a given community differently, and reasons behind this, utilising qualitative participatory action methods. It also seeks to identify potential solutions to barriers to healthy eating.

5. The impact of food poverty on individuals

Not everyone who is food insecure is hungry. People may have enough food to feel satisfied, but have a diet with inadequate levels of micronutrients (vitamin and mineral deficiencies), dietary fibre, vegetables and fruit⁵³. What are the implications of this and why should we be concerned that everyone has access to healthy and nutritious food?

It has been known for decades that poor diet is associated with increased risk of chronic disease⁵⁴ including coronary heart disease (CHD), stroke, type 2 diabetes and certain cancers^{55 56 57 58}. It is responsible for 33% of all cancer deaths⁵⁹. It results in increased falls and fractures in older people⁶⁰.

Poor diet is related to 30% of life-years lost in early death and disability and it has been estimated that approximately 70,000 deaths could be avoided annually across the UK if the public consumed healthy diets. Around two billion pounds are spent by the NHS each year treating diet-related illnesses⁴.

Around 70,000 deaths could be avoided annually across the UK if the public consumed healthy diets.

Food poverty is associated with obesity, resulting from a diet low in fruit and vegetables and high in low-cost energy-dense foods. Reduced access to stores selling healthy foods at affordable prices contributes to excess energy intake in relation to energy output and therefore to weight gain⁶¹.

Children living in food-insecure households are less healthy and less able to resist illness and more likely to be admitted to hospitals⁶². Poor nutrition in children can increase risks of stunting, inadequate cognitive stimulation, iodine deficiency, and iron deficiency anaemia

as well as dentition being a problem with increased likelihood of decayed, missing or filled (DMF) teeth⁶³. Health and nutrition have long been known to have close links with overall educational attainment^{64 65}. Better nourished children often perform significantly better in school⁶⁶.

Finally, limited but growing evidence supports the link between poor diets and anti-social behaviour. Improved nutrition has been linked with fewer incidents of violence and other serious incidents^{67 68}.

Key Message:

An unhealthy, nutritionally poor diet:

- is associated with obesity, heart disease, stroke, diabetes, and some cancers
- is associated with increased risk of falls and fractures in older people and increased risk of disability
- is responsible for 33% of all cancer deaths
- increases risks of stunting, inadequate cognitive stimulation, iodine deficiency, and iron deficiency anaemia in children
- costs the UK £2 billion and 70,000 deaths each year
- compromises educational success in children
- impacts on anti-social behaviour in adults.

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Glossary

BME	Black and ethnic minority persons or groups
BMI	Body mass index. A measure of body fat based on height and weight combined
Bristol Quality of Life Survey	Annual survey, since 2001, to a sample of residents covering a range of topics about Life in Your Neighbourhood
CHD	Coronary heart disease. The narrowing or blockage of arteries supplying the heart, leading to angina (chest pain) and heart attacks
Defra	Department for Environment, Food and Rural Affairs. Government department responsible for policy and regulations on environmental, food and rural issues
DWP	Department of Works and Pension. Government department responsible for welfare and pension policy
Eatwell Plate	The Eatwell Plate is a pictorial summary of the main food groups and their recommended proportions for a healthy diet. It is the method for illustrating dietary advice by the Department of Health
FSM	Free school meals, provided to children who are entitled on the basis of low family income
EMPHO	East Midlands Public Health Observatory. The Public Health Observatories provide knowledge, information and surveillance in public health
GIS	Geographical information systems. These are concerned with the mapping and analysis of data relating to place
LIDNS	Low Income Diet and Nutrition Survey. A national survey carried out on behalf of the Foods Standards Agency
LSOA	Lower Super Output Area. Small areas for reporting census statistics
MIS	Minimum Income Standard. A programme of work led by the Joseph Rowntree Foundation which each year publishes evidence about the minimum income needed for an acceptable standard of living
OOWB	Out of work benefits. Comprises a range of benefits and allowances for people not in work

Note on Method for the evidence review

Health and social science databases including grey literature were searched using terms such as 'food poverty' and 'food (in)security'. This revealed a very large volume of literature. Papers were reviewed to identify those based on high quality primary research and those using recognised high quality methods of systematic review. Evidence about income deprivation and poverty in Bristol was compiled from sources used in Bristol's 'Joint Strategic Needs Assessment'.

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